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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–HQ–ES–2015–0135; FF09E21000 FXES11190900000 156]

Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of review.

SUMMARY: In this Candidate Notice of Review (CNOR), we, the U.S. Fish and Wildlife Service (Service), present an updated list of plant and animal species native to the United States that we regard as candidates for or have proposed for addition to the Lists of Endangered and Threatened Wildlife and Plants under the Endangered Species Act of 1973, as amended. Identification of candidate species can assist environmental

planning efforts by providing advance notice of potential listings, and by allowing landowners and resource managers to alleviate threats and thereby possibly remove the need to list species as endangered or threatened. Even if we subsequently list a candidate species, the early notice provided here could result in more options for species management and recovery by prompting candidate conservation measures to alleviate threats to the species.

This CNOR summarizes the status and threats that we evaluated in order to determine that species qualify as candidates, to assign a listing priority number (LPN) to each species, and to determine whether a species should be removed from candidate status. Additional material that we relied on is available in the Species Assessment and Listing Priority Assignment Forms (species assessment forms) for each candidate species.

This CNOR changes the LPN for two candidates and removes two species from candidate status. Combined with other decisions for individual species that were published separately from this CNOR in the past year, the current number of species that are candidates for listing is 60.

This document also includes our findings on resubmitted petitions and describes our progress in revising the Lists of Endangered and Threatened Wildlife and Plants (Lists) during the period October 1, 2014, through September 30, 2015.

Moreover, we request any additional status information that may be available for the candidate species identified in this CNOR.

DATES: We will accept information on any of the species in this Candidate Notice of Review at any time.

ADDRESSES: This notice is available on the Internet at <http://www.regulations.gov> and <http://www.fws.gov/endangered/what-we-do/cnor.html>. Species assessment forms with information and references on a particular candidate species' range, status, habitat needs, and listing priority assignment are available for review at the appropriate Regional Office listed below in **SUPPLEMENTARY INFORMATION** or at the Branch of Communications and Candidate Conservation, Falls Church, VA (see address under **FOR FURTHER INFORMATION CONTACT**), or on our website (http://ecos.fws.gov/tess_public/reports/candidate-species-report). Please submit any new information, materials, comments, or questions of a general nature on this notice to the Falls Church, VA, address listed under **FOR FURTHER INFORMATION CONTACT**. Please submit any new information, materials, comments, or questions pertaining to a particular species to the address of the Endangered Species Coordinator in the appropriate Regional Office listed in **SUPPLEMENTARY INFORMATION**. Species-specific information and materials we receive will be available for public inspection by appointment, during normal business hours, at the appropriate Regional

Office listed below under **Request for Information** in **SUPPLEMENTARY INFORMATION**. General information we receive will be available at the Branch of Communications and Candidate Conservation, Falls Church, VA (see address under **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Chief, Branch of Communications and Candidate Conservation, U.S. Fish and Wildlife Service Headquarters, MS: ES, 5275 Leesburg Pike, Falls Church, VA 22041-3803 (telephone 703-358-2171). Persons who use a telecommunications device for the deaf may call the Federal Information Relay Service at 800-877-8339.

SUPPLEMENTARY INFORMATION:

We request additional status information that may be available for any of the candidate species identified in this CNOR. We will consider this information to monitor changes in the status or LPN of candidate species and to manage candidates as we prepare listing documents and future revisions to the notice of review. We also request information on additional species to consider including as candidates as we prepare future updates of this notice.

Candidate Notice of Review

Background

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*; ESA), requires that we identify species of wildlife and plants that are endangered or threatened based on the best available scientific and commercial information. As defined in section 3 of the ESA, an endangered species is any species that is in danger of extinction throughout all or a significant portion of its range, and a threatened species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Through the Federal rulemaking process, we add species that meet these definitions to the List of Endangered and Threatened Wildlife at 50 CFR 17.11 or the List of Endangered and Threatened Plants at 50 CFR 17.12. As part of this program, we maintain a list of species that we regard as candidates for listing. A candidate species is one for which we have on file sufficient information on biological vulnerability and threats to support a proposal for listing as endangered or threatened, but for which preparation and publication of a proposal is precluded by higher priority listing actions. We may identify a species as a candidate for listing after we have conducted an evaluation of its status—either on our own initiative, or in response to a petition we have received. If we have made a finding on a petition to list a species, and have found that listing is warranted but precluded by other higher priority listing actions, we will add the species to our list of candidates.

We maintain this list of candidates for a variety of reasons: (1) To notify the

public that these species are facing threats to their survival; (2) to provide advance knowledge of potential listings that could affect decisions of environmental planners and developers; (3) to provide information that may stimulate and guide conservation efforts that will remove or reduce threats to these species and possibly make listing unnecessary; (4) to request input from interested parties to help us identify those candidate species that may not require protection under the ESA, as well as additional species that may require the ESA's protections; and (5) to request necessary information for setting priorities for preparing listing proposals. We encourage collaborative conservation efforts for candidate species, and offer technical and financial assistance to facilitate such efforts. For additional information regarding such assistance, please contact the appropriate Regional Office listed under **Request for Information** or visit our website, <http://www.fws.gov/endangered/what-we-do/cca.html>.

Previous Notices of Review

We have been publishing CNORs since 1975. The most recent was published on December 5, 2014 (79 FR 72450). CNORs published since 1994 are available on our website, <http://www.fws.gov/endangered/what-we-do/cnor.html>. For copies of CNORs published prior to 1994, please contact the Branch of Communications and Candidate Conservation (see **FOR FURTHER INFORMATION CONTACT** section, above).

On September 21, 1983, we published guidance for assigning an LPN for each candidate species (48 FR 43098). Using this guidance, we assign each candidate an LPN

of 1 to 12, depending on the magnitude of threats, immediacy of threats, and taxonomic status; the lower the LPN, the higher the listing priority (that is, a species with an LPN of 1 would have the highest listing priority). Section 4(h)(3) of the ESA (16 U.S.C. 1533(h)(3)) requires the Secretary to establish guidelines for such a priority-ranking system. As explained below, in using this system, we first categorize based on the magnitude of the threat(s), then by the immediacy of the threat(s), and finally by taxonomic status.

Under this priority-ranking system, magnitude of threat can be either “high” or “moderate to low.” This criterion helps ensure that the species facing the greatest threats to their continued existence receive the highest listing priority. It is important to recognize that all candidate species face threats to their continued existence, so the magnitude of threats is in relative terms. For all candidate species, the threats are of sufficiently high magnitude to put them in danger of extinction, or make them likely to become in danger of extinction in the foreseeable future. But for species with higher-magnitude threats, the threats have a greater likelihood of bringing about extinction or are expected to bring about extinction on a shorter timescale (once the threats are imminent) than for species with lower-magnitude threats. Because we do not routinely quantify how likely or how soon extinction would be expected to occur absent listing, we must evaluate factors that contribute to the likelihood and time scale for extinction. We therefore consider information such as: (1) The number of populations or extent of range of the species affected by the threat(s), or both; (2) the biological significance of the affected

population(s), taking into consideration the life-history characteristics of the species and its current abundance and distribution; (3) whether the threats affect the species in only a portion of its range, and, if so, the likelihood of persistence of the species in the unaffected portions; (4) the severity of the effects and the rapidity with which they have caused or are likely to cause mortality to individuals and accompanying declines in population levels; (5) whether the effects are likely to be permanent; and (6) the extent to which any ongoing conservation efforts reduce the severity of the threat(s).

As used in our priority-ranking system, immediacy of threat is categorized as either “imminent” or “nonimminent,” and is based on when the threats will begin. If a threat is currently occurring or likely to occur in the very near future, we classify the threat as imminent. Determining the immediacy of threats helps ensure that species facing actual, identifiable threats are given priority for listing proposals over those for which threats are only potential or species that are intrinsically vulnerable to certain types of threats but are not known to be presently facing such threats.

Our priority-ranking system has three categories for taxonomic status: Species that are the sole members of a genus; full species (in genera that have more than one species); and subspecies and distinct population segments of vertebrate species (DPS).

The result of the ranking system is that we assign each candidate a listing priority number of 1 to 12. For example, if the threats are of high magnitude, with immediacy

classified as imminent, the listable entity is assigned an LPN of 1, 2, or 3 based on its taxonomic status (i.e., a species that is the only member of its genus would be assigned to the LPN 1 category, a full species to LPN 2, and a subspecies or DPS would be assigned to LPN 3). In summary, the LPN ranking system provides a basis for making decisions about the relative priority for preparing a proposed rule to list a given species. No matter which LPN we assign to a species, each species included in this notice as a candidate is one for which we have sufficient information to prepare a proposed rule for listing because it is in danger of extinction or likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

For more information on the process and standards used in assigning LPNs, a copy of the 1983 guidance is available on our website at:

http://www.fws.gov/endangered/esa-library/pdf/1983_LPN_Policy_FR_pub.pdf.

Information on the LPN assigned to a particular species is summarized in this CNOR, and the species assessment for each candidate contains the LPN chart and a rationale for the determination of the magnitude and immediacy of threat(s) and assignment of the LPN.

To the extent this revised notice differs from all previous animal, plant, and combined candidate notices of review for native species or previous 12-month warranted-but-precluded petition findings for those candidate species that were petitioned for listing, this notice supercedes them.

Summary of This CNOR

Since publication of the previous CNOR on December 5, 2014 (79 FR 72450), we reviewed the available information on candidate species to ensure that a proposed listing is justified for each species, and reevaluated the relative LPN assigned to each species. We also evaluated the need to emergency list any of these species, particularly species with higher priorities (i.e., species with LPNs of 1, 2, or 3). This review and reevaluation ensures that we focus conservation efforts on those species at greatest risk.

In addition to reviewing candidate species since publication of the last CNOR, we have worked on findings in response to petitions to list species, and on proposed and final determinations for rules to list species under the ESA. Some of these findings and determinations have been completed and published in the **Federal Register**, while work on others is still under way (see *Preclusion and Expeditious Progress*, below, for details).

Based on our review of the best available scientific and commercial information, with this CNOR, we change the LPN for two candidates and remove two species from candidate status. Combined with the other decisions published separately from this CNOR, a total of 60 species (18 plant and 42 animal species) are now candidates awaiting preparation of rules proposing their listing. These 60 species, along with the 71

species currently proposed for listing (including 1 species proposed for listing due to similarity in appearance), are included in Table 1.

Table 2 lists the changes from the previous CNOR, and includes 55 species identified in the previous CNOR as either proposed for listing or classified as candidates that are no longer in those categories. This includes 31 species for which we published a final listing rule, 20 candidate species for which we published separate not-warranted findings and removed them from candidate status, 1 species for which we published a withdrawal of a proposed rule, 1 species for which we published a separate candidate removal, and the 2 species in this notice that we have determined do not meet the definition of an endangered species or threatened species and therefore do not warrant listing. We have removed these species from candidate status in this CNOR.

New Candidates

We have not identified any new candidate species through this notice but identified one species—the Sierra Nevada DPS of the red fox—as a candidate on October 8, 2015, as a result of a separate petition finding published in the **Federal Register** (80 FR 60989).

Listing Priority Changes in Candidates

We reviewed the LPNs for all candidate species and are changing the number for the following species discussed below.

Flowering plants

Dichanthelium hirstii (Hirst Brothers' panic grass) — The following summary is based on information initially provided in the May 11, 2004, petition and updated information contained in our files. *Dichanthelium hirstii* is a perennial grass that produces erect, leafy, flowering stems from May to October. The species occurs in coastal plain intermittent ponds, usually in wet savanna or pine barren habitats, and is known to occur at only three sites in New Jersey, one site in Delaware, two sites in North Carolina, and one site in Georgia. Six of the extant *D. hirstii* populations are located on public land and one is on private land.

At each site the species is threatened by encroachment of woody and herbaceous vegetation, competition from rhizomatous perennials, fluctuations in hydrology, and threats associated with small population number and size; sites in New Jersey are threatened by illegal off-road vehicle use. Given the naturally fluctuating number of plants found at each site, and the isolated nature of the wetlands (limiting dispersal opportunities), even small changes in the species' habitat could result in local extirpation. Loss of any known sites would constitute a significant contraction of the species' range. An increase in regional precipitation patterns causing long-term flooding in the species' coastal plain pond habitat is recent and coincides with a precipitous decline in population size in New Jersey and first-time absence of the population in Delaware. Therefore, we are changing the immediacy of threats from nonimminent to imminent and, consequently, the LPN of the species from a 5 to a 2.

Pinus albicaulis (Whitebark pine) — The following summary is based on information in our files and in the petition received on December 9, 2008. Whitebark pine is a hardy conifer found at alpine tree line and subalpine elevations in Washington, Oregon, Nevada, California, Idaho, Montana, and Wyoming, and in British Columbia and Alberta, Canada. In the United States, approximately 96 percent of land where the species occurs is federally owned or managed, primarily by the U.S. Forest Service. Whitebark pine is a slow-growing, long-lived tree that often lives for 500 and sometimes more than 1,000 years. It is considered a keystone, or foundation, species in western North America, where it increases biodiversity and contributes to critical ecosystem functions.

The primary threat to the species is from disease in the form of the nonnative white pine blister rust and its interaction with other threats. Whitebark pine also is currently experiencing mortality from predation by the native mountain pine beetle (*Dendroctonus ponderosae*), but the current epidemic appears to be subsiding. We also anticipate that continuing environmental effects resulting from climate change will result in direct habitat loss for whitebark pine. Models predict that suitable habitat for whitebark pine will decline precipitously within the next 100 years. Past and ongoing fire suppression is also negatively affecting populations of whitebark pine through direct habitat loss. Additionally, environmental changes resulting from changing climatic conditions are acting alone and in combination with the effects of fire suppression to increase the frequency and severity of wildfires. Lastly, the existing regulatory mechanisms are inadequate to address the threats presented above.

As the mountain pine beetle epidemic appears to be subsiding, we no longer consider this threat to be having the high level of impact that was seen in recent years. However, given projected warming trends, we expect that conditions will remain favorable for epidemic levels of mountain pine beetle into the foreseeable future. The significant threats from white pine blister rust, fire, and fire suppression, and environmental effects of climate change remain on the landscape. However, the overall magnitude of threat to whitebark pine is somewhat diminished given the current absence of epidemic levels of mountain pine beetle, and because of this, individuals with genetic resistance to white pine blister rust likely have a higher probability of survival. Survival and reproduction of genetically resistant trees are critical to the persistence of the species given the imminent, ubiquitous presence of white pine blister rust on the landscape. Overall, the threats to the species are ongoing, and therefore imminent, and are now moderate in magnitude. Thus, we have changed the LPN for whitebark pine from a 2 to an 8.

Candidate Removals

As summarized below, we have evaluated the threats to the following species and considered factors that, individually and in combination, currently or potentially could pose a risk to the species and their habitats. After a review of the best available scientific and commercial data, we conclude that listing these species under the Endangered Species Act is not warranted because these species are not likely to become endangered species within the foreseeable future throughout all or a significant portion of

their respective ranges. Therefore, we no longer consider them to be candidate species for listing. We will continue to monitor the status of these species and to accept additional information and comments concerning this finding. We will reconsider our determination in the event that we gather new information that indicates that the threats are of a considerably greater magnitude or imminence than identified through assessments of information contained in our files, as summarized here.

Crustaceans

Anchialine pool shrimp (*Metabetaeus lohena*) — *Metabetaeus lohena* is a species of shrimp belonging to the family Alpheidae. At the time *M. lohena* became a candidate, it was considered to be an endemic shrimp to the Hawaiian Islands, restricted to small anchialine habitats that were thought to have imminent threats. Though the total number of occupied pools in Hawaii is not known, *M. lohena* has recently been observed in at least 35 anchialine pools and pool groups on the islands of Hawaii, Maui, and Oahu. Many of these pools are located within protected habitat on State (e.g., Manuka and Ahihi-Kinau Natural Area Reserves) and Federal land (e.g., Volcanoes National Park and Pearl Harbor National Wildlife Refuge).

New information has extended the range and habitat of *Metabetaeus lohena* to include Rapa Nui (Easter Island), Chile, where it is was recently identified in an anchialine pool and coastal shallow water wells. A specimen found in Ambon Bay (Maluku Islands, Indonesia) was also identified as *M. lohena*; however, this determination remains uncertain because the specimen reviewed was highly degraded.

The discovery of at least one, and perhaps two, populations so distant from the Hawaiian Islands suggests that *M. lohena* has greater dispersal capabilities than previously known and the species has recently been observed naturally recolonizing restored anchialine habitats in the Hawaiian Islands. The survey effort for this species outside of Hawaii and Rapa Nui has not provided information about population levels in those areas.

Our review of the best available scientific information indicates that *Metabetaeus lohena* exists across a much greater area than was previously believed, has greater dispersal ability than previously known, can naturally recolonize restored habitats, and largely exists in protected areas where it is known to occur. Given this recent information, we find that the best available information indicates that the species is not likely to become in danger of extinction in the foreseeable future throughout all or a significant portion of its range.

Anchialine pool shrimp (*Palaemonella burnsi*) — *Palaemonella burnsi* is a species of shrimp belonging to the family Palaemonidae. At the time that *P. burnsi* became a candidate, it was considered to be an endemic shrimp to the Hawaiian Islands, restricted to small anchialine habitats that were thought to have imminent threats. Though the total number of occupied pools in Hawaii is not known, *P. burnsi* has recently been observed in anchialine pools and pool groups on the islands of Hawaii and Maui. Many of these pools are located within protected habitat on State (e.g., Manuka and Ahihi-Kinau Natural Area Reserves) and Federal land (e.g., Kaloko-Honokohau National Historic Park).

New information has revealed that *Palaemonella burnsi* occurs in Kume-jima in

the Ryuku archipelago, Japan, where it is was recently identified in coral reef flats. The discovery of an additional population in non-anchialine habitat so distant from the Hawaiian Islands suggests that *Palaemonella burnsi* exists across a much greater area than was previously believed, is not restricted to anchialine habitats, and largely exists in protected areas where it is known to occur. Given this recent information, we find that the best available information indicates that the species is not likely to become in danger of extinction in the foreseeable future throughout all or a significant portion of its range.

Petition Findings

The ESA provides two mechanisms for considering species for listing. One method allows the Secretary, on the Secretary's own initiative, to identify species for listing under the standards of section 4(a)(1). We implement this authority through the candidate program, discussed above. The second method for listing a species provides a mechanism for the public to petition us to add a species to the Lists. The CNOR serves several purposes as part of the petition process: (1) In some instances (in particular, for petitions to list species that the Service has already identified as candidates on its own initiative), it serves as the initial petition finding; (2) for candidate species for which the Service has made a warranted-but-precluded petition finding, it serves as a "resubmitted" petition finding that the ESA requires the Service to make each year; and (3) it documents the Service's compliance with the statutory requirement to monitor the status of species for which listing is warranted but precluded, and to ascertain if they need

emergency listing.

First, the CNOR serves as an initial petition finding in some instances. Under section 4(b)(3)(A), when we receive a petition to list a species, we must determine within 90 days, to the maximum extent practicable, whether the petition presents substantial information indicating that listing may be warranted (a “90-day finding”). If we make a positive 90-day finding, we must promptly commence a status review of the species under section 4(b)(3)(A); we must then make, within 12 months of the receipt of the petition, and publish one of three possible findings (a “12-month finding”):

- (1) The petitioned action is not warranted;
- (2) The petitioned action is warranted (in which case we are required to promptly publish a proposed regulation to implement the petitioned action; once we publish a proposed rule for a species, sections 4(b)(5) and 4(b)(6) of the ESA govern further procedures, regardless of whether we issued the proposal in response to a petition); or
- (3) The petitioned action is warranted, but (a) the immediate proposal of a regulation and final promulgation of a regulation implementing the petitioned action is precluded by pending proposals to determine whether any species is endangered or threatened, and (b) expeditious progress is being made to add qualified species to the Lists. We refer to this third option as a “warranted-but-precluded finding.”

We define “candidate species” to mean those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of

a proposed rule to list, but for which issuance of the proposed rule is precluded (61 FR 64481; December 5, 1996). The standard for making a species a candidate through our own initiative is identical to the standard for making a warranted-but-precluded 12-month petition finding on a petition to list, and we add all petitioned species for which we have made a warranted-but-precluded 12-month finding to the candidate list.

Therefore, all candidate species identified through our own initiative already have received the equivalent of substantial 90-day and warranted-but-precluded 12-month findings. Nevertheless, if we receive a petition to list a species that we have already identified as a candidate, we review the status of the newly petitioned candidate species and through this CNOR publish specific section 4(b)(3) findings (i.e., substantial 90-day and warranted-but-precluded 12-month findings) in response to the petitions to list these candidate species. We publish these findings as part of the first CNOR following receipt of the petition. In this CNOR, we are making a substantial 90-day finding and a warranted but precluded 12-month petition finding for *Streptanthus bracteatus* (bracted twistflower). This species was added to the candidate list on October 26, 2011, and we received a petition to list this species on August 5, 2014. We have identified the candidate species for which we received petitions by the code “C*” in the category column on the left side of Table 1 below.

Second, the CNOR serves as a “resubmitted” petition finding. Section 4(b)(3)(C)(i) of the ESA requires that when we make a warranted-but-precluded finding

on a petition, we treat the petition as one that is resubmitted on the date of the finding. Thus, we must make a 12-month petition finding in compliance with section 4(b)(3)(B) of the ESA at least once a year, until we publish a proposal to list the species or make a final not-warranted finding. We make these annual findings for petitioned candidate species through the CNOR. These annual findings supercede any findings from previous CNORs and the initial 12-month warranted-but-precluded finding, although all previous findings are part of the administrative record for the new finding, and we may rely upon them or incorporate them by reference in the new finding as appropriate.

Third, through undertaking the analysis required to complete the CNOR, the Service determines if any candidate species needs emergency listing. Section 4(b)(3)(C)(iii) of the ESA requires us to “implement a system to monitor effectively the status of all species” for which we have made a warranted-but-precluded 12-month finding, and to “make prompt use of the [emergency listing] authority [under section 4(b)(7)] to prevent a significant risk to the well being of any such species.” The CNOR plays a crucial role in the monitoring system that we have implemented for all candidate species by providing notice that we are actively seeking information regarding the status of those species. We review all new information on candidate species as it becomes available, prepare an annual species assessment form that reflects monitoring results and other new information, and identify any species for which emergency listing may be appropriate. If we determine that emergency listing is appropriate for any candidate, we will make prompt use of the emergency listing authority under section 4(b)(7). For

example, on August 10, 2011, we emergency listed the Miami blue butterfly (76 FR 49542). We have been reviewing and will continue to review, at least annually, the status of every candidate, whether or not we have received a petition to list it. Thus, the CNOR and accompanying species assessment forms constitute the Service's system for monitoring and making annual findings on the status of petitioned species under sections 4(b)(3)(C)(i) and 4(b)(3)(C)(iii) of the ESA.

A number of court decisions have elaborated on the nature and specificity of information that we must consider in making and describing the petition findings in the CNOR. The CNOR that published on November 9, 2009 (74 FR 57804), describes these court decisions in further detail. As with previous CNORs, we continue to incorporate information of the nature and specificity required by the courts. For example, we include a description of the reasons why the listing of every petitioned candidate species is both warranted and precluded at this time. We make our determinations of preclusion on a nationwide basis to ensure that the species most in need of listing will be addressed first and also because we allocate our listing budget on a nationwide basis (see below). Regional priorities can also be discerned from Table 1, below, which includes the lead region and the LPN for each species. Our preclusion determinations are further based upon our budget for listing activities for unlisted species only, and we explain the priority system and why the work we have accomplished has precluded action on listing candidate species.

In preparing this CNOR, we reviewed the current status of, and threats to, the 56 candidates for which we have received a petition to list and the 3 listed species for which we have received a petition to reclassify from threatened to endangered, where we found the petitioned action to be warranted but precluded. We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for each of these species, has been, for the preceding months, and continues to be, precluded by higher-priority listing actions. Additional information that is the basis for this finding is found in the species assessments and our administrative record for each species.

Our review included updating the status of, and threats to, petitioned candidate or listed species for which we published findings, under section 4(b)(3)(B) of the ESA, in the previous CNOR. We have incorporated new information we gathered since the prior finding and, as a result of this review, we are making continued warranted-but-precluded 12-month findings on the petitions for these species. However, for some of these species, we are currently engaged in a thorough review of all available data to determine whether to proceed with a proposed listing rule; this review may result in us concluding that listing is no longer warranted.

The immediate publication of proposed rules to list these species was precluded by our work on higher-priority listing actions, listed below, during the period from October 1, 2014, through September 30, 2015. Below we describe the actions that continue to preclude the immediate proposal and final promulgation of a regulation

implementing each of the petitioned actions for which we have made a warranted-but-precluded finding, and we describe the expeditious progress we are making to add qualified species to, and remove species from, the Lists. We will continue to monitor the status of all candidate species, including petitioned species, as new information becomes available to determine if a change in status is warranted, including the need to emergency list a species under section 4(b)(7) of the ESA.

In addition to identifying petitioned candidate species in Table 1 below, we also present brief summaries of why each of these candidates warrants listing. More complete information, including references, is found in the species assessment forms. You may obtain a copy of these forms from the Regional Office having the lead for the species, or from the Fish and Wildlife Service's Internet website:

http://ecos.fws.gov/tess_public/reports/candidate-species-report. As described above, under section 4 of the ESA, we identify and propose species for listing based on the factors identified in section 4(a)(1)—either on our own initiative or through the mechanism that section 4 provides for the public to petition us to add species to the Lists of Endangered or Threatened Wildlife and Plants under the ESA.

Preclusion and Expeditious Progress

To make a finding that a particular action is warranted but precluded, the Service must make two determinations: (1) That the immediate proposal and timely

promulgation of a final regulation is precluded by pending listing proposals and (2) that expeditious progress is being made to add qualified species to either of the lists and to remove species from the lists (16 U.S.C. 1533(b)(3)(B)(iii)).

Preclusion

A listing proposal is precluded if the Service does not have sufficient resources available to complete the proposal, because there are competing demands for those resources, and the relative priority of those competing demands is higher. Thus, in any given fiscal year (FY), multiple factors dictate whether it will be possible to undertake work on a listing proposal regulation or whether promulgation of such a proposal is precluded by higher priority listing actions—(1) The amount of resources available for completing the listing function, (2) the estimated cost of completing the proposed listing, and (3) the Service’s workload and prioritization of the proposed listing in relation to other actions.

Available Resources

The resources available for listing actions are determined through the annual Congressional appropriations process. In FY 1998 and for each fiscal year since then, Congress has placed a statutory cap on funds that may be expended for the Listing Program. This spending cap was designed to prevent the listing function from depleting funds needed for other functions under the ESA (for example, recovery functions, such as removing species from the Lists), or for other Service programs (see House Report 105–

163, 105th Congress, 1st Session, July 1, 1997). The funds within the spending cap are available to support work involving the following listing actions: Proposed and final listing rules; 90-day and 12-month findings on petitions to add species to the Lists or to change the status of a species from threatened to endangered; annual “resubmitted” petition findings on prior warranted-but-precluded petition findings as required under section 4(b)(3)(C)(i) of the ESA; critical habitat petition findings; proposed and final rules designating critical habitat; and litigation-related, administrative, and program-management functions (including preparing and allocating budgets, responding to Congressional and public inquiries, and conducting public outreach regarding listing and critical habitat).

We cannot spend more for the Listing Program than the amount of funds within the spending cap without violating the Anti-Deficiency Act (see 31 U.S.C. 1341(a)(1)(A)). In addition, since FY 2002, the Service's budget has included a subcap for critical habitat designations for already-listed species to ensure that some funds within the spending cap for listing are available for completing Listing Program actions other than critical habitat designations for already-listed species (“The critical habitat designation subcap will ensure that some funding is available to address other listing activities” (House Report No. 107–103, 107th Congress, 1st Session. June 19, 2001)). In FY 2002 and each year until FY 2006, the Service had to use virtually all of the funds within the critical habitat subcap to address court-mandated designations of critical habitat, and consequently none of the funds within the critical habitat subcap were

available for other listing activities. In some FYs since 2006, we have not needed to use all of the funds within the critical habitat to comply with court orders, and we therefore could use the remaining funds within the subcap towards additional proposed listing determinations for high-priority candidate species. In other FYs, while we did not need to use all of the funds within the critical habitat subcap to comply with court orders requiring critical habitat actions, we did not use the remaining funds towards additional proposed listing determinations, and instead used the remaining funds towards completing the critical habitat determinations concurrently with proposed listing determinations; this allowed us to combine the proposed listing determination and proposed critical habitat designation into one rule, thereby being more efficient in our work. In FY 2015, based on the Service's workload, we were able to use some of the funds within the critical habitat subcap to fund proposed listing determinations.

For FY 2012, Congress also put in place two additional subcaps within the listing cap: One for listing actions for foreign species and one for petition findings. As with the critical habitat subcap, if the Service does not need to use all of the funds within either subcap, we are able to use the remaining funds for completing proposed or final listing determinations. In FY 2015, based on the Service's workload, we were able to use some of the funds within the foreign species subcap and the petitions subcap to fund proposed listing determinations.

We make our determinations of preclusion on a nationwide basis to ensure that

the species most in need of listing will be addressed first, and also because we allocate our listing budget on a nationwide basis. Through the listing cap, the three subcaps, and the amount of funds needed to complete court-mandated actions within those subcaps, Congress and the courts have in effect determined the amount of money available for listing activities nationwide. Therefore, the funds in the listing cap—other than those within the subcaps needed to comply with court orders or court-approved settlement agreements requiring critical habitat actions for already-listed species, listing actions for foreign species, and petition findings—set the framework within which we make our determinations of preclusion and expeditious progress.

For FY 2015, on December 16, 2014, Congress passed a Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. No. 113–235), which provided funding through September 30, 2015, at the same level as FY 2014. In particular, it included an overall spending cap of \$20,515,000 for the listing program. Of that, no more than \$1,504,000 could be used for listing actions for foreign species, and no more than \$1,501,000 could be used to make 90-day or 12-month findings on petitions. The Service thus had \$ 12,905,000 available to work on proposed and final listing determinations for domestic species. In addition, if the Service had funding available within the critical habitat, foreign species, or petition subcaps after those workloads had been completed, it could use those funds to work on listing actions other than critical habitat designations or foreign species.

Costs of Listing Actions. The work involved in preparing various listing documents can be extensive, and may include, but is not limited to: Gathering and assessing the best scientific and commercial data available and conducting analyses used as the basis for our decisions; writing and publishing documents; and obtaining, reviewing, and evaluating public comments and peer review comments on proposed rules and incorporating relevant information from those comments into final rules. The number of listing actions that we can undertake in a given year also is influenced by the complexity of those listing actions; that is, more complex actions generally are more costly. The median cost for preparing and publishing a 90-day finding is \$39,276; for a 12-month finding, \$100,690; for a proposed listing rule with proposed critical habitat, \$345,000; and for a final listing rule with final critical habitat, \$305,000.

Prioritizing Listing Actions. The Service's Listing Program workload is broadly composed of four types of actions, which the Service prioritizes as follows: (1) Compliance with court orders and court-approved settlement agreements requiring that petition findings or listing or critical habitat determinations be completed by a specific date; (2) essential litigation-related, administrative, and listing program-management functions; (3) section 4 (of the ESA) listing and critical habitat actions with absolute statutory deadlines; and (4) section 4 listing actions that do not have absolute statutory deadlines. In the last few years, the Service received many new petitions and a single petition to list 404 species, significantly increasing the number of actions within the second category of our workload—actions that have absolute statutory deadlines. As a

result of the petitions to list hundreds of species, we currently have over 500 12-month petition findings yet to be initiated and completed.

An additional way in which we prioritize work in the section 4 program is application of the listing priority guidelines (48 FR 43098; September 21, 1983). Under those guidelines, we assign each candidate an LPN of 1 to 12, depending on the magnitude of threats (high or moderate to low), immediacy of threats (imminent or nonimminent), and taxonomic status of the species (in order of priority: monotypic genus (a species that is the sole member of a genus), a species, or a part of a species (subspecies or distinct population segment)). The lower the listing priority number, the higher the listing priority (that is, a species with an LPN of 1 would have the highest listing priority). A species with a higher LPN would generally be precluded from listing by species with lower LPNs, unless work on a proposed rule for the species with the higher LPN can be combined with work on a proposed rule for other high-priority species. In addition to prioritizing species with our 1983 guidance, because of the large number of high-priority species we have had in the recent past, we had further ranked the candidate species with an LPN of 2 by using the following extinction-risk type criteria:

International Union for the Conservation of Nature and Natural Resources (IUCN) Red list status/rank, Heritage rank (provided by NatureServe), Heritage threat rank (provided by NatureServe), and species currently with fewer than 50 individuals, or 4 or fewer populations. Those species with the highest IUCN rank (critically endangered), the highest Heritage rank (G1), the highest Heritage threat rank (substantial, imminent

threats), and currently with fewer than 50 individuals, or fewer than 4 populations, originally comprised a group of approximately 40 candidate species (“Top 40”). These 40 candidate species had the highest priority to receive funding to work on a proposed listing determination and we used this to formulate our work plan for FYs 2010 and 2011 that was included in the MDL Settlement Agreement (see below), as well as for work on proposed and final listing rules for the remaining candidate species with LPNs of 2 and 3.

Finally, proposed rules for reclassification of threatened species to endangered species are lower priority, because as listed species, they are already afforded the protections of the ESA and implementing regulations. However, for efficiency reasons, we may choose to work on a proposed rule to reclassify a species to endangered if we can combine this with work that is subject to a court order or court-approved deadline.

Since before Congress first established the spending cap for the Listing Program in 1998, the Listing Program workload has required considerably more resources than the amount of funds Congress has allowed for the Listing Program. It is therefore important that we be as efficient as possible in our listing process. As we implement our listing work plan and work on proposed rules for the highest priority species in the next several years, we are preparing multi-species proposals when appropriate, and these may include species with lower priority if they overlap geographically or have the same threats as one of the highest priority species. In addition, we take into consideration the availability of

staff resources when we determine which high-priority species will receive funding to minimize the amount of time and resources required to complete each listing action.

Listing Program Workload. Each FY we determine, based on the amount of funding Congress has made available within the Listing Program spending cap, specifically which actions we will have the resources to work on in that FY. We then prepare Allocation Tables that identify the actions that we are funding for that FY, and how much we estimate it will cost to complete each action; these Allocation Tables are part of our record for this notice and the listing program. Our Allocation Table for FY 2012, which incorporated the Service's approach to prioritizing its workload, was adopted as part of a settlement agreement in a case before the U.S. District Court for the District of Columbia (Endangered Species Act Section 4 Deadline Litigation, No. 10-377 (EGS), MDL Docket No. 2165 ("MDL Litigation"), Document 31-1 (D.D.C. May 10, 2011) ("MDL Settlement Agreement")). The requirements of paragraphs 1 through 7 of that settlement agreement, combined with the work plan attached to the agreement as Exhibit B, reflected the Service's Allocation Tables for FY 2011 and FY 2012. In addition, paragraphs 2 through 7 of the agreement require the Service to take numerous other actions through FY 2017—in particular, complete either a proposed listing rule or a not-warranted finding for all 251 species designated as "candidates" in the 2010 candidate notice of review ("CNOR") before the end of FY 2016, and complete final listing determinations for those species proposed for listing within the statutory deadline (usually one year from the proposal). Paragraph 10 of that settlement agreement sets

forth the Service's conclusion that "fulfilling the commitments set forth in this Agreement, along with other commitments required by court orders or court-approved settlement agreements already in existence at the signing of this Settlement Agreement (listed in Exhibit A), will require substantially all of the resources in the Listing Program." As part of the same lawsuit, the court also approved a separate settlement agreement with the other plaintiff in the case; that settlement agreement requires the Service to complete additional actions in specific fiscal years — including 12-month petition findings for 11 species, 90-day petition findings for 478 species, and proposed listing determinations or not-warranted findings for 40 species.

These settlement agreements have led to a number of results that affect our preclusion analysis. First, the Service has been, and will continue to be, limited in the extent to which it can undertake additional actions within the Listing Program through FY 2017, beyond what is required by the MDL Settlement Agreements. Second, because the settlement is court-approved, two broad categories of actions now fall within the Service's highest priority (compliance with a court order): (1) The actions required to be completed in FY 2015 by the MDL Settlement Agreements; and (2) completion, before the end of FY 2016, of proposed listings or not-warranted findings for most of the candidate species identified in this CNOR (in particular, for those candidate species that were included in the 2010 CNOR). Therefore, each year, one of the Service's highest priorities is to make steady progress towards completing by the end of 2017 proposed and final listing determinations for the 2010 candidate species—based on the Service's LPN

prioritization system, preparing multi-species actions when appropriate, and taking into consideration the availability of staff resources.

Based on these prioritization factors, we continue to find that proposals to list the petitioned candidate species included in Table 1 are all precluded by higher priority listing actions, including listing actions with deadlines required by court-orders and court-approved settlement agreements and listing actions with absolute statutory deadlines. We provide tables in the Expeditious Progress section, below, identifying the listing actions that we completed in FY 2015, as well as those we worked on but did not complete in FY 2015.

Expeditious Progress

As explained above, a determination that listing is warranted but precluded must also demonstrate that expeditious progress is being made to add and remove qualified species to and from the Lists. As with our “precluded” finding, the evaluation of whether progress in adding qualified species to the Lists has been expeditious is a function of the resources available for listing and the competing demands for those funds. (Although we do not discuss it in detail here, we are also making expeditious progress in removing species from the list under the Recovery program in light of the resources available for delisting, which is funded by a separate line item in the budget of the Endangered Species Program. During FY 2015, we completed a delisting rule for one species.) As discussed

below, given the limited resources available for listing, we find that we made expeditious progress in adding qualified species to the Lists in FY 2015.

We provide below tables cataloguing the work of the Service's Listing Program in FY 2015. This work includes all three of the steps necessary for adding species to the Lists: (1) Identifying species that warrant listing; (2) undertaking the evaluation of the best available scientific data about those species and the threats they face, and preparing proposed and final listing rules; and (3) adding species to the Lists by publishing proposed and final listing rules that include a summary of the data on which the rule is based and show the relationship of that data to the rule. After taking into consideration the limited resources available for listing, the competing demands for those funds, and the completed work catalogued in the tables below, we find that we made expeditious progress to add qualified species to the Lists in FY 2015.

First, we made expeditious progress in the third and final step: listing qualified species. In FY 2015, we resolved the status of 31 species that we determined, or had previously determined, qualified for listing. Moreover, for 31 species, the resolution was to add them to the Lists, most with concurrent designations of critical habitat, and for 1 species we published a withdrawal of the proposed rule. We also proposed to list an additional 67 qualified species, most with concurrent critical habitat proposals.

Second, we are making expeditious progress in the second step: working towards adding qualified species to the Lists. In FY 2015, we worked on developing proposed listing rules or not-warranted 12-month petition findings for 28 species (most of them with concurrent critical habitat proposals). Although we have not yet completed those actions, we are making expeditious progress towards doing so.

Third, we are making expeditious progress in the first step towards adding qualified species to the Lists: identifying additional species that qualify for listing. In FY 2015, we completed 90-day petition findings for 67 species and 12-month petition findings for 27 species.

Our accomplishments this year should also be considered in the broader context of our commitment to reduce the number of candidate species for which we have not made final determinations whether or not to list. On May 10, 2011, the Service filed in the MDL Litigation a settlement agreement that put in place an ambitious schedule for completing proposed and final listing determinations at least through FY 2016; the court approved that settlement agreement on September 9, 2011. That agreement required, among other things, that for all 251 species that were included as candidates in the 2010 CNOR, the Service submit to the **Federal Register** proposed listing rules or not-warranted findings by the end of FY 2016, and for any proposed listing rules, the Service complete final listing determinations within the statutory time frame. Paragraph 6 of the agreement provided indicators that the Service is making adequate progress towards

meeting that requirement—which included: completing proposed listing rules or not-warranted findings for at least 200 species by the end of FY 2015. The Service has completed proposed listing rules or not-warranted findings for 220 of the 2010 candidate species, as well as final listing rules for 143 of those proposed rules, and is therefore making adequate progress towards meeting all of the requirements of the MDL settlement agreement. Both by entering into the settlement agreement and by making adequate progress towards making final listing determinations for the 251 species on the 2010 candidate list, the Service is making expeditious progress to add qualified species to the lists.

The Service’s progress in FY 2015 included completing and publishing the following determinations:

FY 2015 Completed Listing Actions			
Publication Date	Title	Actions	FR Pages
10/24/2014	Threatened Species Status for Dakota Skipper and Endangered Species Status for Poweshiek Skipperling	Final Listing Endangered and Threatened	79 FR 6367– 63748
11/20/2014	Threatened Species Status for Gunnison sage-grouse	Final Listing Threatened	79 FR 69192–69310
12/11/2014	Threatened Species Status for the Rufa Red Knot	Final Listing Threatened	79 FR 73706–73748
12/31/2014	90-day finding on Monarch Butterfly and California Gnatcatcher	90-day petition finding Substantial	79 FR 78775–78778
4/2/2015	Threatened Species Status for the Northern Long-eared Bat with 4(d) Rule	Final Listing Threatened	80 FR 17974–18033

4/7/2015	Endangered Species Status for the Big Sandy Crayfish and the Guyandotte River Crayfish	12-month petition finding Warranted Proposed Listing Endangered	80 FR 18711–18739
4/7/2015	12-Month Finding on a Petition To List Humboldt Marten as an Endangered or Threatened Species	12-month petition finding Not warranted	80 FR 18742–18772
4/10 /2015	90-Day Findings on Ten Petitions (Clear Lake hitch, Mojave shoulderband snail, Northern spotted owl, Relict dace, San Joaquin Valley giant flower-loving fly, Western pond turtle, Yellow-cedar, Egyptian tortoise, Golden conure, Long-tailed chinchilla)	90-day petition finding Substantial	80 FR 19259–19263
4/23/2015	Withdrawal of the Proposed Rule To List the Bi-State Distinct Population Segment of Greater Sage-Grouse and Designate Critical Habitat	Proposed Rule Withdrawal	80 FR 22828–22866
6/23/2015	12-Month Finding on a Petition to List Leona’s Little Blue Butterfly as Endangered or Threatened	12-month petition finding Not warranted	80 FR 35916–35931
6/30/2015	90-day petition findings on 31 species	90-day petition finding Substantial and not substantial (not substantial for Gray Wolf, Blue Ridge gray-cheeked salamander, California giant salamander, Caddo Mountain salamander, Colorado checkered whiptail, the DPS of Wild Horse, Olympic torrent salamander, Pigeon Mountain salamander, Weller's salamander and wingtail crayfish; substantial for alligator snapping turtle, Apalachicola kingsnake, Arizona toad, Blanding's turtle, Cascade Caverns salamander, Cascades frog, Cedar Key mole skink, foothill yellow-legged frog, gopher frog, green salamander, Illinois chorus frog, Kern Canyon slender	80 FR 37568– 37579

		salamander, Key ringneck snake, Oregon slender salamander, Relictual slender salamander, Rim Rock crowned snake, Rio Grande cooter, silvery phacelia, spotted turtle, southern hog-nosed snake, and western spadefoot toad)	
9/15/2015	12-Month Finding on a Petition to List the New England Cottontail as an Endangered or Threatened Species	12-month petition finding Not warranted Notice candidate removal	80 FR 55286–55304
9/15/2015	Threatened Species Status for <i>Platanthera integrilabia</i> (White Fringeless Orchid)	Proposed Listing Threatened	80 FR 55304–55321
9/18/2015	90-Day Findings on 25 Petitions	90-day petition finding Substantial and not substantial (not substantial for Cahaba pebblesnail and the Stephens' kangaroo rat; substantial for Blue Calamintha bee, California spotted owl, Cascade torrent salamander, Columbia torrent salamander, Florida pine snake, Inyo Mountains salamander, Kern Plateau salamander, lesser slender salamander, limestone salamander, northern bog lemming, Panamint alligator lizard, Peaks of Otter salamander, rusty-patched bumblebee, Shasta salamander, short-tailed snake, southern rubber boa, regal fritillary, Tinian monarch, tricolored blackbird, tufted puffin, Virgin River spinedace, wood turtle, and the Yuman desert fringe-	80 FR 56423– 56432

		toed lizard)	
9/29/2015	Endangered Species Status for <i>Chamaecrista lineata</i> var. <i>keyensis</i> (Big Pine Partridge Pea), <i>Chamaesyce deltoidea</i> ssp. <i>serpyllum</i> (Wedge Spurge), and <i>Linum arenicola</i> (Sand Flax), and Threatened Species Status for <i>Argythamnia blodgettii</i> (Blodgett's Silverbush)	Proposed Listing Endangered and Threatened	80 FR 58535–58567
9/30/2015	Endangered Status for 49 Species from the Hawaiian Islands	Proposed Listing Endangered	80 FR 58820–58909
9/30 /2015	Threatened Species Status for the Eastern Massasauga Rattlesnake	Proposed Listing Threatened	80 FR 58688–58701
9/30/2015	Threatened Species Status for the Elfin-woods Warbler with 4(d) Rule	Proposed Listing Threatened	80 FR 58674–58688
10/1/2015	Endangered Status for 16 Species and Threatened Status for 7 Species in Guam and the Commonwealth of the Northern Mariana Islands	Final Listing Endangered and Threatened	80 FR 59423–59497
10/2/2015	12-Month Finding on a Petition to List Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as an Endangered or Threatened Species	12-month petition finding Not warranted Notice Candidate removal	80 FR 59857–59942
10/6/2015	12-Month Finding on a Petition to List the Sonoran Desert Tortoise as an Endangered or Threatened Species	12-month petition finding Not warranted Notice Candidate removal	80 FR 60321–60335
10/6/2015	Proposed Threatened Species Status for Suwannee Moccasinshell	Proposed Listing Threatened	80 FR 60335–60348
10/6/2015	Endangered Species Status for <i>Trichomanes punctatum</i> ssp. <i>floridanum</i> (Florida Bristle Fern)	Final Listing Endangered	80 FR 60439–60465
10/6/2015	Threatened Species Status for Black Pinesnake With 4(d) Rule	Final Listing Threatened	80 FR 60467–60489
10/7/2015	Threatened Species Status for the Headwater Chub and a Distinct Population Segment of the Roundtail Chub	Proposed Listing Threatened	80 FR 60753–60783

10/8/2015	12-Month Findings on Petitions To List 19 Species as Endangered or Threatened Species	12-month petition finding Not warranted Notice Candidate removal	80 FR 60834–60850
10/8/2015	12-Month Finding on a Petition To List Sierra Nevada Red Fox as an Endangered or Threatened Specie	12-month petition finding Not warranted and warranted but precluded	80 FR 60989–61028
10/8/2015	Threatened Species Status for the Kentucky Arrow Darter	Proposed Listing Threatened	80 FR 60961–60988
10/13/2015	Proposed Endangered Status for Five Species from American Samoa	Proposed Listing Endangered	80 FR 61567–61607

Our expeditious progress also included work on listing actions that we funded in previous fiscal years and in FY 2015, but did not complete in FY 2015. For these species, we have completed the first step, and have been working on the second step, necessary for adding species to the Lists. These actions are listed below. All the actions in the table are being conducted under a deadline set by a court through a court order or settlement agreement with the exception of the 90-day petition finding for the Miami tiger beetle.

Actions funded in Previous FYs and FY 2015 but not yet completed	
Species	Action
Actions Subject to Court Order/Settlement Agreement	
Washington ground squirrel	Proposed listing
Xantus's murrelet	Proposed listing
Four Florida plants (Florida pineland crabgrass, Florida prairie clover, pineland sandmat, and Everglades bully)	Proposed listing
Black warrior waterdog	Proposed listing
Black mudalia	Proposed listing
Highlands tiger beetle	Proposed listing
Sicklefin redbhorse	Proposed listing

Texas hornshell	Proposed listing
Guadalupe fescue	Proposed listing
Actions Subject to Statutory Deadline	
Miami Tiger Beetle	90-day petition finding

We also funded work on resubmitted petitions findings for 56 candidate species (species petitioned prior to the last CNOR). We did not include an updated assessment form as part of our resubmitted petition findings for the 56 candidate species for which we are preparing either proposed listing determinations or not warranted 12-month findings. However, for the resubmitted petition findings, in the course of preparing proposed listing determinations or 12-month not warranted findings, we continue to monitor new information about their status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the well-being of any of these candidate species; see summaries below regarding publication of these determinations (these species will remain on the candidate list until a proposed listing rule is published). Because the majority of these petitioned species were already candidate species prior to our receipt of a petition to list them, we had already assessed their status using funds from our Candidate Conservation Program, so we continue to monitor the status of these species through our Candidate Conservation Program. The cost of updating the species assessment forms and publishing the joint publication of the CNOR and resubmitted petition findings is shared between the Listing Program and the Candidate Conservation Program.

During FY 2015, we also funded work on resubmitted petition findings for

petitions to uplist three listed species (one grizzly bear population, Delta smelt, and *Sclerocactus brevispinus* (Pariette cactus)), for which we had previously received a petition and made a warranted-but-precluded finding.

Another way that we have been expeditious in making progress to add qualified species to the Lists is that we have endeavored to make our listing actions as efficient and timely as possible, given the requirements of the relevant law and regulations and constraints relating to workload and personnel. We are continually considering ways to streamline processes or achieve economies of scale, such as by batching related actions together. Given our limited budget for implementing section 4 of the ESA, these efforts also contribute towards finding that we are making expeditious progress to add qualified species to the Lists.

Although we have not been able to resolve the listing status of many of the candidates, we continue to contribute to the conservation of these species through several programs in the Service. In particular, the Candidate Conservation Program, which is separately budgeted, focuses on providing technical expertise for developing conservation strategies and agreements to guide voluntary on-the-ground conservation work for candidate and other at-risk species. The main goal of this program is to address the threats facing candidate species. Through this program, we work with our partners (other Federal agencies, State agencies, Tribes, local governments, private landowners, and private conservation organizations) to address the threats to candidate species and

other species at risk. We are currently working with our partners to implement voluntary conservation agreements for more than 110 species covering 6.1 million acres of habitat. In some instances, the sustained implementation of strategically designed conservation efforts have culminated in making listing unnecessary for species that are candidates for listing or for which listing has been proposed (see http://ecos.fws.gov/tess_public/reports/non-listed-species-precluded-from-listing-due-to-conservation-report).

Findings for Petitioned Candidate Species

Below are updated summaries for petitioned candidates for which we published findings under section 4(b)(3)(B). In accordance with section 4(b)(3)(C)(i), we treat any petitions for which we made warranted-but-precluded 12-month findings within the past year as having been resubmitted on the date of the warranted-but-precluded finding. We are making continued warranted-but-precluded 12-month findings on the petitions for these species (for 12-month findings on resubmitted petitions for species that we determined no longer meet the definition of “endangered species” or “threatened species,” see summaries above under **Candidate Removals**).

Mammals

Peñasco least chipmunk (*Tamias minimus atristria*) — The following summary is based on information contained in our files. Peñasco least chipmunk is endemic to the White Mountains, Otero and Lincoln Counties, and the Sacramento Mountains, Otero

County, New Mexico. The Peñasco least chipmunk historically had a broad distribution throughout the Sacramento Mountains within ponderosa pine forests. The last verification of persistence of the Sacramento Mountains population of Peñasco least chipmunk was in 1966, and the subspecies appears to be extirpated from the Sacramento Mountains. The only remaining known distribution of the least chipmunk is restricted to open, high-elevation talus slopes within a subalpine grassland that is located in the Sierra Blanca area of the White Mountains in Lincoln and Otero Counties, New Mexico.

The Peñasco least chipmunk faces threats from present or threatened destruction, modification, and curtailment of its habitat from the alteration or loss of mature ponderosa pine forests in one of the two historically occupied areas. The documented decline in occupied localities, in conjunction with the small numbers of individuals captured, is linked to widespread habitat alteration. Moreover, the highly fragmented nature of its distribution is a significant contributor to the vulnerability of this subspecies and increases the likelihood of very small, isolated populations being extirpated. As a result of this fragmentation, even if suitable habitat exists (or is restored) in the Sacramento Mountains, the likelihood of natural recolonization of historical habitat or population expansion from the White Mountains is extremely remote. Considering the high magnitude and immediacy of these threats to the subspecies and its habitat, and the vulnerability of the White Mountains population, we conclude that the least chipmunk is in danger of extinction throughout all of its known range now or in the foreseeable future.

The one known remaining extant population of Peñasco least chipmunk in the White Mountains is particularly susceptible to extinction as a result of small, reduced

population sizes and its isolation. Because of the reduced population size and lack of contiguous habitat adjacent to the extant White Mountains population, even a small impact on the White Mountains could have a very large impact on the status of the species as a whole. As a result of its restricted range, apparent small population size, and fragmented historical habitat, the White Mountains population is inherently vulnerable to extinction due to effects of small population sizes (e.g., loss of genetic diversity). These impacts are likely to be seen in the population at some point in the foreseeable future, but do not appear to be affecting this population currently, as it appears to be stable at this time. Therefore, we conclude that the threats to this population are of high magnitude, but not imminent. Therefore, we assign an LPN of 6 to the subspecies.

Washington ground squirrel (*Urocitellus washingtoni*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Red tree vole, north Oregon coast DPS (*Arborimus longicaudus*) — The following summary is based on information contained in our files and in our initial warranted-but-precluded finding, published in the **Federal Register** on October 13, 2011 (76 FR 63720). Red tree voles are small, mouse-sized rodents that live in conifer forests

and spend almost all of their time in the tree canopy. They are one of the few animals that can persist on a diet of conifer needles, which is their principal food. Red tree voles are endemic to the humid, coniferous forests of western Oregon (generally west of the crest of the Cascade Range) and northwestern California (north of the Klamath River). The north Oregon coast DPS of the red tree vole comprises that portion of the Oregon Coast Range from the Columbia River south to the Siuslaw River. Red tree voles demonstrate strong selection for nesting in older conifer forests, which are now relatively rare across the range of the DPS; they avoid nesting in younger forests.

Although data are not available to rigorously assess population trends, information from retrospective surveys indicates red tree voles have declined in the range of the DPS and are largely absent in areas where they were once relatively abundant. Older forests that provide habitat for red tree voles are limited and highly fragmented, while ongoing forest practices in much of the population's range maintain the remnant patches of older forest in a highly fragmented and isolated condition. Modeling indicates that 11 percent of the range currently contains tree vole habitat, largely restricted to the 22 percent of the population's range that is under Federal ownership.

Existing regulatory mechanisms on State and private lands are inadequate to prevent continued harvest of forest stands at a scale and extent that would be meaningful for conserving red tree voles. Biological characteristics of red tree voles, such as small home ranges, limited dispersal distances, and low reproductive potential, limit their ability to persist in areas of extensive habitat loss and alteration. These biological characteristics also make it difficult for the tree voles to recolonize isolated habitat

patches. Due to the species' reduced distribution, the red tree vole is vulnerable to random environmental disturbances that may remove or further isolate large blocks of already limited habitat, and to extirpation from such factors as lack of genetic variability, inbreeding depression, and demographic stochasticity. Although the entire population is experiencing threats, the impact is less pronounced on Federal lands, where much of the red tree vole habitat remains. Hence, the magnitude of these threats is moderate to low. The threats are imminent because habitat loss and reduced distribution are currently occurring within the range of the DPS. Therefore, we have retained an LPN of 9 for this DPS.

Pacific walrus (*Odobenus rosmarus divergens*) — The following information is based on information in our files and our warranted-but-precluded 12-month petition finding published on February 10, 2011 (76 FR 7634). The Pacific walrus uses sea ice over the continental shelf waters of the northern Bering and Chukchi Seas for a number of important behaviors. Sea ice is optimal habitat for females and young animals year round, but most males remain in the Bering Sea even when ice is absent. Unlike seals, which can remain in the water for extended periods, walrus must haul out onto ice or land periodically to rest. The Pacific walrus is a traditional and important source of food and products to native Alaskans, especially those living on Saint Lawrence Island, and to native Russians.

Annually, females and young animals, as well as some males, migrate up to 1,500 km (932 mi) between winter breeding areas in the sub-Arctic (northern Bering Sea) and summer foraging areas in the Chukchi Sea. Historically, the females and calves remained

on pack ice over the continental shelf of the Chukchi Sea throughout the summer, using it as a platform for resting after making shallow foraging dives for invertebrates on the sea floor. Sea ice also provides isolation from disturbance and predators. Since 1979, the extent of summer Arctic sea ice has declined. The lowest records of minimum sea ice extent occurred from 2007 to 2014. Based on the best scientific information available, we anticipate that sea ice will retreat northward off the Chukchi continental shelf for 1 to 5 months every year in the foreseeable future.

When ice in the Chukchi Sea melts beyond the limits of the continental shelf (and the ability of the walrus to obtain food), thousands of female and young walrus congregate at coastal haulouts. Although coastal haulouts have historically provided a place to rest, the aggregation of so many animals at this time of year has increased in the last 7 years. Not only are the number of animals more concentrated at coastal haulouts than on widely dispersed sea ice, but also the probability of disturbance from humans and terrestrial animals is much higher. Disturbances at coastal haulouts can cause stampedes, leading to mortalities and injuries. In addition, there is also concern that the concentration of animals will cause local prey depletion, leading to longer foraging trips, increased energy costs, and potential effects on female condition and calf survival. These effects may lead to a population decline.

We recognize that Pacific walrus face additional stressors from ocean warming, ocean acidification, disease, oil and gas exploration and development, increased shipping, commercial fishing, and subsistence harvest, but subsistence harvest is the only threat that could contribute to finding the species to be in danger of extinction throughout all or

a significant portion of its range, or likely to become so in the foreseeable future. We found that subsistence harvest will contribute to putting the species in danger of extinction if the population declines but harvest levels remain the same. Because the threat of sea ice loss is not having significant population-level effects currently, but is projected to, we determined that the magnitude of this threat is moderate, not high. Because both the loss of sea ice habitat and the ongoing practice of subsistence harvest are presently occurring, these threats are imminent. Thus, we assigned an LPN of 9 to this subspecies.

Birds

Spotless crane, American Samoa DPS (*Porzana tabuensis*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Xantus's murrelet (*Synthliboramphus hypoleucus*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to

publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Red-crowned parrot (*Amazona viridigenalis*) — The following summary is based on information contained in the notice of 12-month finding (October 6, 2011, 76 FR 62016), scientific reports, journal articles, and newspaper articles, and also, to a large extent, on communication with the U.S. Fish and Wildlife Service (Service), Gulf Coast Prairie Landscape Conservation Cooperative, Texas Parks and Wildlife Department, The Nature Conservancy, Rio Grande Joint Venture, World Birding Center, University of Texas-Brownsville, and Rio Grande Birding Festival biologists. Currently, there are no changes to the range or distribution of the red-crowned parrot. The red-crowned parrot is nonmigratory, and occurs in fragmented isolated habitat in the Mexican States of Veracruz, San Luis Potosi, Nuevo Leon, Tamaulipas, and northeast Queretaro. In the United States, it occurs in the State of Texas, in Mission, McAllen, Pharr, and Edinburg in Hidalgo County, and in Brownsville, Los Fresnos, San Benito, and Harlingen in Cameron County. Feral populations may also exist in southern California, Puerto Rico, Hawaii, and Florida, and escaped birds have been reported in central Texas. The species is nomadic during the winter (nonbreeding) season when large flocks range widely to forage, moving tens of kilometers during a single flight in Mexico.

As of 2004, half of the native population is believed to be found in the United

States. Within Texas, the species is thought to move between urban areas in search of food and other available resources. The results of two seasons of monitoring the species' use of revegetated habitat, native habitat, and urban habitats within the Rio Grande corridor found that the red-crowned parrot occurred exclusively in urban habitats in the Texas Lower Rio Grande Valley during the breeding season. Systematic annual monitoring of red-crowned parrot populations in the Lower Rio Grande Valley, Texas, has not been undertaken, although there are numerous reported sightings and anecdotal observations of the bird and its behavior, abundance, nesting, or threats. An iNaturalist project was created for the parrot in early 2015, as an initial step in developing an annual monitoring program that will gather data on distribution, numbers, nesting, and foraging habitat from academics, conservation organizations, and citizen scientists. Monitoring efforts for the red-crowned parrot in Mexico are unknown, although a proposal has been developed to create a conservation plan and begin a monitoring program in central Tamaulipas (if funding is found).

Conservation efforts include a project that was initiated by the Service and the Rio Grande Joint Venture in the Lower Rio Grande Valley to understand and compare how birds are using revegetated tracts of land versus native refuge tracts and urban habitats, including the effect of previous flooding and projections of how climate change may affect the distribution of birds in the Lower Rio Grande Valley. A final report for this project showed red-crowned parrots using only urban habitats during the breeding season, but it is hoped that some of the revegetation efforts, as well as conservation of existing native tracts of land, will provide habitat in the future once the trees have

matured. Because loss of nesting habitat is a concern for the species in southern Texas, two projects, one in Weslaco and one in Harlingen, Texas, were initiated in 2011, to provide nest boxes in palms for the red-crowned parrot. As of March 2013, these nest sites had not been used, although red-crowned parrots had actively traveled throughout the area during the prior spring, summer, and fall months.

The primary threats within Mexico and Texas remain habitat destruction and modification from logging, deforestation, conversion of suitable habitat, and urbanization, as well as trapping and illegal trade of the parrots. Multiple laws and regulations have been passed to control illegal trade, but they are not adequately enforced. In addition, existing regulations do not adequately address the habitat threats to the species. Thus, the inadequacy of existing regulations and their enforcement continue to threaten the red-crowned parrot. However, at least four city ordinances have been established in South Texas prohibiting malicious acts (injury, mortality) to birds and their habitat. A new effort in 2015 is under way to gain recognition for the species as indigenous in Texas; a classification that would afford State protection. Disease and predation still do not threaten the species. Pesticide exposure is not known to affect the red-crowned parrot. Threats to the species are extensive and are imminent and, therefore, we have determined that a LPN of 2 remains appropriate for the species.

Sprague's pipit (*Anthus spragueii*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual

resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Reptiles

Louisiana pine snake (*Pituophis ruthveni*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Gopher tortoise, eastern population (*Gopherus polyphemus*) — The following summary is based on information in our files. The gopher tortoise is a large, terrestrial, herbivorous turtle that reaches a total length up to 15 inches (in) (38 centimeters (cm)), and typically inhabits the sandhills, pine/scrub oak uplands, and pine flatwoods associated with the longleaf pine (*Pinus palustris*) ecosystem. A fossorial animal, the gopher tortoise is usually found in areas with well-drained, deep, sandy soils; open tree canopy; and diverse, abundant herbaceous groundcover.

The gopher tortoise ranges from extreme southern South Carolina south through

peninsular Florida, and west through southern Georgia, Florida, southern Alabama, and Mississippi, into extreme southeastern Louisiana. The eastern population of the gopher tortoise in South Carolina, Florida, Georgia, and Alabama (east of the Mobile and Tombigbee Rivers) is a candidate species; the western population of gopher tortoise—which is found in Alabama (west of the Mobile and Tombigbee Rivers), Mississippi, and Louisiana—is federally listed as threatened.

The primary threat to the gopher tortoise is habitat fragmentation, destruction, and modification (either deliberately or from inattention), including conversion of longleaf pine forests to incompatible silvicultural or agricultural habitats, urbanization, shrub and hardwood encroachment (mainly from fire exclusion or insufficient fire management), construction of solar farms, and establishment and spread of invasive species. Other threats include disease, predation (mainly on nests and young tortoises), and inadequate regulatory mechanisms, specifically those needed to protect and enhance relocated tortoise populations in perpetuity. The magnitude of threats to the eastern population of gopher tortoise is moderate to low, since the population extends over a broad geographic area and conservation measures are in place in some areas. However, since the eastern population is currently being affected by a number of threats, including destruction and modification of its habitat, disease, predation, exotics, and inadequate regulatory mechanisms, these threats are imminent. Thus, we have continued to assign a LPN of 8 for this species.

Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this

notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Amphibians

Relict leopard frog (*Lithobates onca*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Striped newt (*Notophthalmus perstriatus*) — The following summary is based on information contained in our files. The striped newt is a small salamander that inhabits ephemeral ponds surrounded by upland habitats of high pine, scrubby flatwoods, and scrub. Longleaf pine–turkey oak stands with intact ground cover containing wiregrass are the preferred upland habitat for striped newts, followed by scrub, then flatwoods. Life-

history stages of the striped newt are complex, and include the use of both aquatic and terrestrial habitats throughout their life cycle. Striped newts are opportunistic feeders that prey on a variety of items such as frog eggs, worms, snails, fairy shrimp, spiders, and insects (adult and larvae) that are of appropriate size. They occur in appropriate habitats from the Atlantic Coastal Plain of southeastern Georgia to the north-central peninsula of Florida and through the Florida panhandle into portions of southwest Georgia, upward to Taylor County in western Georgia. Prior to 2014, there was thought to be a 125-km (78-mi) separation between the western and eastern portions of the striped newt's range. However, the discovery of five adult striped newts in Taylor County, Florida, represents a significant possible range connection. In addition to the newts discovered in Taylor County, Florida, researchers also discovered 15 striped newts (14 pedomorphs and 1 non-gilled adult) in a pond in Osceola County, Florida, which represents a significant range extension to the south.

The historical range of the striped newt was likely similar to the current range. However, loss of native longleaf habitat, fire suppression, and the natural patchy distribution of upland habitats used by striped newts have resulted in fragmentation of existing populations. Other threats to the species include disease, drought, and inadequate regulatory mechanisms. Overall, the magnitude of the threats is moderate and imminent. Therefore, we assigned a LPN of 8 to the newt. However, due to recent information that suggests the striped newt is likely extirpated from Apalachicola National Forest, the LPN may warrant changing to a lower number in the future.

Berry Cave salamander (*Gyrinophilus gulolineatus*) — The following summary is

based on information in our files. The Berry Cave salamander is recorded from Berry Cave in Roane County; from Mud Flats, Aycock Spring, Christian, Meades Quarry, Meades River, Fifth, and The Lost Puddle caves in Knox County; from Blythe Ferry Cave in Meigs County; and from an unknown cave in Athens, McMinn County, Tennessee. In May of 2014, the species was also discovered in an additional cave, Small Cave, in McMinn County. These cave systems are all located within the Upper Tennessee River and Clinch River drainages. Viable populations are known to occur in Berry and Mudflats caves.

Ongoing threats to Berry Cave salamanders include lye leaching in the Meades Quarry Cave as a result of past quarrying activities, the possible development of a roadway with potential to impact the recharge area for the Meades Quarry Cave system, urban development in Knox County, water quality impacts despite existing State and Federal laws, and hybridization between spring salamanders and Berry Cave salamanders in Meades Quarry Cave. These threats, coupled with confined distribution of the species and apparent low population densities, are all factors that leave the Berry Cave salamander vulnerable to extirpation. We have determined that the Berry Cave salamander faces ongoing, and therefore imminent. The threats to the salamander are moderate in magnitude because, although some of the threats to the species are widespread, the salamander still occurs in several different cave systems, and existing populations appear stable. We continue to assign this species a LPN of 8.

Black Warrior waterdog (*Necturus alabamensis*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice.

However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Fishes

Arkansas darter (*Etheostoma cragini*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Pearl darter (*Percina aurora*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about

this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Sicklefin redhorse (*Moxostoma* sp.) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Longfin smelt (*Spirinchus thaleichthys*), Bay-Delta DPS— The following summary is based on information contained in our files and the petition we received on August 8, 2007. On April 2, 2012 (77 FR 19756), we determined that the longfin smelt San Francisco Bay–Delta distinct population segment (Bay-Delta DPS) was warranted for listing as an endangered or threatened species under the ESA. Longfin smelt measure 9–11 cm (3.5–4.3 in) standard length. Longfin smelt are considered pelagic and anadromous, although anadromy in longfin smelt is poorly understood, and certain populations in other parts of the species' range are not anadromous and complete their entire life cycle in freshwater lakes and streams. Longfin smelt usually live for 2 years, spawn, and then die, although some individuals may spawn as 1- or 3-year-old fish before dying. In the Bay-Delta, longfin smelt are believed to spawn primarily in freshwater in the lower reaches of the Sacramento River and San Joaquin River.

Longfin smelt numbers in the Bay-Delta have declined significantly since the 1980s. Abundance indices derived from the Fall Midwater Trawl (FMWT), Bay Study Midwater Trawl (BSMT), and Bay Study Otter Trawl (BSOT) all show marked declines in Bay-Delta longfin smelt populations from 2002 to 2012. Longfin smelt abundance over the last decade is the lowest recorded in the 40-year history of CDFG's FMWT monitoring surveys.

The primary threat to the DPS is from reduced freshwater flows. Freshwater flows, especially winter-spring flows, are significantly correlated with longfin smelt abundance —longfin smelt abundance is lower when winter-spring flows are lower. The long-term decline in abundance of longfin smelt in the Bay-Delta has been partially attributed to reductions in food availability and disruptions of the Bay-Delta food web caused by establishment of the nonnative overbite clam and likely by increasing ammonium concentrations. The threats remain high in magnitude, since they pose a significant risk to the DPS throughout its range. The threats are ongoing, and thus are imminent. Thus, we are maintaining an LPN of 3 for this population.

Clams

Texas fatmucket (*Lampsilis bracteata*) — The following summary is based on information contained in our files. The Texas fatmucket is a large, elongated freshwater mussel that is endemic to central Texas. Its shell can be moderately thick, smooth, and rhomboidal to oval in shape. Its external coloration varies from tan to brown with continuous dark brown, green-brown, or black rays, and internally it is pearly white, with

some having a light salmon tint. This species historically occurred throughout the Colorado and Guadalupe–San Antonio River basins but is now known to occur only in nine streams within these basins in very limited numbers. All existing populations are represented by only one or two individuals and are not likely to be stable or recruiting.

The Texas fatmucket is primarily threatened by habitat destruction and modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels. This species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the Texas fatmucket and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the extinction of the Texas fatmucket in the foreseeable future.

The threats to the Texas fatmucket are high in magnitude, because habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the Texas fatmucket and profoundly affect its survival and recruitment. These threats are exacerbated by climate change, which will increase the frequency and magnitude of droughts. Remaining populations are small, isolated, and highly vulnerable to stochastic events, which could lead to extirpation or extinction. These threats are imminent because they are ongoing

and will continue in the foreseeable future. Habitat loss and degradation have already occurred and will continue as the human population continues to grow in central Texas. Texas fatmucket populations are very small and vulnerable to extirpation, which increases the species' vulnerability to extinction. Based on imminent, high-magnitude threats, we maintained an LPN of 2 for the Texas fatmucket.

Texas fawnsfoot (*Truncilla macrodon*) — The following summary is based on information contained in our files. The Texas fawnsfoot is a small, relatively thin-shelled freshwater mussel that is endemic to central Texas. Its shell is long and oval, generally free of external sculpturing, with external coloration that varies from yellowish- or orangish-tan, brown, reddish-brown, to smoky-green with a pattern of broken rays or irregular blotches. The internal color is bluish-white or white and iridescent posteriorly. This species historically occurred throughout the Colorado and Brazos River basins and is now known from only five locations. The Texas fawnsfoot has been extirpated from nearly all of the Colorado River basin and from much of the Brazos River basin. Of the populations that remain, only three are likely to be stable and recruiting; the remaining populations are disjunct and restricted to short stream reaches.

The Texas fawnsfoot is primarily threatened by habitat destruction and modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels, as well as by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population

fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the Texas fawnsfoot and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the extinction of the Texas fawnsfoot in the foreseeable future.

The threats to the Texas fawnsfoot are high in magnitude. Habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the Texas fawnsfoot and profoundly affect its survival and recruitment. These threats are exacerbated by climate change, which will increase the frequency and magnitude of droughts. Remaining populations are small, isolated, and highly vulnerable to stochastic events. These threats are imminent because they are ongoing and will continue in the foreseeable future. Habitat loss and degradation has already occurred and will continue as the human population continues to grow in central Texas. The small Texas fawnsfoot populations are at risk of extirpation, which increases the species' vulnerability to extinction. Based on imminent, high-magnitude threats, we assigned the Texas fawnsfoot an LPN of 2.

Texas hornshell (*Popenaias popei*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about

this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Golden orb (*Quadrula aurea*) — The following summary is based on information contained in our files. The golden orb is a small, round-shaped freshwater mussel that is endemic to central Texas. This species historically occurred throughout the Nueces-Frio and Guadalupe–San Antonio River basins and is now known from only nine locations in four rivers. The golden orb has been eliminated from nearly the entire Nueces-Frio River basin. Four of these populations appear to be stable and are reproducing, and the remaining five populations are small and isolated and show no evidence of recruitment. It appears that the populations in the middle Guadalupe and lower San Marcos Rivers are likely connected. The remaining extant populations are highly fragmented and restricted to short reaches.

The golden orb is primarily threatened by habitat destruction and modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels. The species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the golden orb and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the golden orb becoming in danger

of extinction in the foreseeable future.

The threats to the golden orb are moderate in magnitude. Although habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the golden orb and are likely to be exacerbated by climate change, which will increase the frequency and magnitude of droughts, four large populations remain, including one that was recently discovered, suggesting that the threats are not high in magnitude. The threats from habitat loss and degradation are imminent because habitat loss and degradation have already occurred and will likely continue as the human population continues to grow in central Texas. The three smaller golden orb populations are vulnerable to extirpation, which increases the species' vulnerability to extinction. Based on imminent, moderate threats, we maintain an LPN of 8 for the golden orb.

Smooth pimpleback (*Quadrula houstonensis*) — The following summary is based on information contained in our files. The smooth pimpleback is a small, round-shaped freshwater mussel that is endemic to central Texas. This species historically occurred throughout the Colorado and Brazos River basins and is now known from only nine locations. The smooth pimpleback has been eliminated from nearly the entire Colorado River and all but one of its tributaries, and has been limited to the central and lower Brazos River drainage. Five of the populations are represented by no more than a few individuals and are small and isolated. Six of the existing populations appear to be relatively stable and recruiting.

The smooth pimpleback is primarily threatened by habitat destruction and

modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels. The species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation, and isolation, and the anticipated threat of nonnative species. Threats to the smooth pimpleback and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the smooth pimpleback becoming in danger of extinction in the foreseeable future.

The threats to the smooth pimpleback are moderate in magnitude. Although habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the smooth pimpleback and may be exacerbated by climate change, which will increase the frequency and magnitude of droughts, several large populations remain, including one that was recently discovered, suggesting that the threats are not high in magnitude. The threats from habitat loss and degradation are imminent because they have already occurred and will continue as the human population continues to grow in central Texas. Several smooth pimpleback populations are quite small and vulnerable to extirpation, which increases the species' vulnerability to extinction. Based on imminent, moderate threats, we maintain an LPN of 8 for the smooth pimpleback.

Texas pimpleback (*Quadrula petrina*) — The following summary is based on

information contained in our files. The Texas pimpleback is a large freshwater mussel that is endemic to central Texas. This species historically occurred throughout the Colorado and Guadalupe–San Antonio River basins, but it is now known to only occur in four streams within these basins. Only two populations (Concho River and San Saba River) appear large enough to be stable with recruitment, although evidence of recruitment is limited in the Concho River population. The remaining two populations are represented by one or two individuals and are highly disjunct.

The Texas pimpleback is primarily threatened by habitat destruction and modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels. This species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change (which will increase the frequency and magnitude of droughts), population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the Texas pimpleback and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the Texas pimpleback becoming in danger of extinction in the foreseeable future.

The threats to the Texas pimpleback are high in magnitude, because habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the entire range of the Texas

pimpleback and profoundly affect its survival and recruitment. The only remaining populations are small, isolated, and highly vulnerable to stochastic events, which could lead to extirpation or extinction. The threats are imminent because habitat loss and degradation have already occurred and will continue as the human population continues to grow in central Texas. Based on imminent, high-magnitude threats, we assigned the Texas pimpleback an LPN of 2.

Snails

Black mudalia (*Elimia melanoides*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Magnificent ramshorn (*Planorbella magnifica*) — Magnificent ramshorn is the largest North American air-breathing freshwater snail in the family Planorbidae. It has a discoidal (i.e., coiling in one plane), relatively thin shell that reaches a diameter commonly exceeding 35 mm and heights exceeding 20 mm. The great width of its shell, in relation to the diameter, makes it easily identifiable at all ages. The shell is brown colored (often with leopard like spots) and fragile, thus indicating it is adapted to still or

slow flowing aquatic habitats. The magnificent ramshorn is believed to be a southeastern North Carolina endemic. The species is known from only four sites in the lower Cape Fear River Basin in North Carolina. Although the complete historical range of the species is unknown, the size of the species and the fact that it was not reported until 1903 suggest that the species may have always been rare and localized.

Salinity and pH are major factors limiting the distribution of the magnificent ramshorn, as the snail prefers freshwater bodies with circumneutral pH (i.e., pH within the range of 6.8–7.5). While members of the family Planorbidae are hermaphroditic, it is currently unknown whether magnificent ramshorns self-fertilize their eggs, mate with other individuals of the species, or both. Like other members of the Planorbidae family, the magnificent ramshorn is believed to be primarily a vegetarian, feeding on submerged aquatic plants, algae, and detritus.

While several factors have likely contributed to the possible extirpation of the magnificent ramshorn in the wild, the primary factors include loss of habitat associated with the extirpation of beavers (and their impoundments) in the early 20th century, increased salinity and alteration of flow patterns, and increased input of nutrients and other pollutants. The magnificent ramshorn appears to be extirpated from the wild due to habitat loss and degradation resulting from a variety of human-induced and natural factors. The only known surviving individuals of the species are presently being held and propagated at a private residence, a lab at North Carolina (NC) State University's Veterinary School, and the NC Wildlife Resources Commission's Watha State Fish Hatchery. While efforts have been made to restore habitat for the magnificent ramshorn

at one of the sites known to have previously supported the species, all of the sites continue to be affected or threatened by the same factors (i.e., salt water intrusion and other water quality degradation, nuisance aquatic plant control, storms, sea level rise, etc.) believed to have resulted in extirpation of the species from the wild. Currently, only three captive populations exist: a single robust captive population of the species comprised of approximately 900+ adults, one with approximately 200+ adults, and one population of 50+ small individuals. Although the robust captive population of the species has been maintained since 1993, a single catastrophic event, such as a severe storm, disease, or predator infestation affecting this captive population, could result in the near extinction of the species. Therefore, we assigned an LPN of 2 to this species.

Huachuca springsnail (*Pyrgulopsis thompsoni*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Insects

Hermes copper butterfly (*Lycaena hermes*) — Hermes copper butterfly primarily occurs in San Diego County, California, and a few records of the species have been

documented in Baja California, Mexico. The species inhabits coastal sage scrub and southern mixed chaparral and is dependent on its larval host plant, *Rhamnus crocea* (spiny redberry), to complete its lifecycle. Adult Hermes copper butterflies lay single eggs on spiny redberry stems where they hatch and feed until pupation occurs at the base of the plant. Hermes copper butterflies have one flight period occurring in mid-May to early-July, depending on weather conditions and elevation. We estimate there were at least 59 known separate historical populations throughout the species' range since the species was first described. Of the 59 known Hermes copper butterfly populations, 21 are extant, 27 are believed to have been extirpated, and 11 are of unknown status.

Primary threats to Hermes copper butterfly are megafires (large wildfires), and small and isolated populations. Secondary threats include increased wildfire frequency that results in habitat loss, and combined impacts of existing development, possible future (limited) development, existing dispersal barriers, and fragmentation of habitat. Hermes copper butterfly occupies scattered areas of sage scrub and chaparral habitat in an arid region susceptible to wildfires of increasing frequency and size. The likelihood that individuals of the species will be burned as a result of catastrophic wildfires, combined with the isolation and small size of extant populations makes Hermes copper butterfly particularly vulnerable to population extirpation rangewide. Overall, the threats that Hermes copper butterfly faces are high in magnitude because the major threats (particularly mortality due to wildfire and increased wildfire frequency) occur throughout all of the species' range and are likely to result in mortality and population-level impacts to the species. The threats are nonimminent overall because the impact of wildfire to

Hermes copper butterfly and its habitat occurs on a sporadic basis and we do not have the ability to predict when wildfires will occur. This species faces high-magnitude nonimminent threats; therefore, we assigned this species a LPN of 5.

Puerto Rican harlequin butterfly (*Atlantea tulita*) — The following summary is based on information in our files and in the petition we received on February 29, 2009. The Puerto Rican harlequin butterfly is endemic to Puerto Rico, and one of the four species endemic to the Greater Antilles within the genus *Atlantea*. This species occurs within the subtropical moist forest life zone in the northern karst region (i.e., the municipality of Quebradillas) of Puerto Rico, and in the subtropical wet forest (i.e., Maricao Commonwealth Forest, municipality of Maricao). The Puerto Rican harlequin butterfly has only been found utilizing *Oplonia spinosa* (prickly bush) as its host plant (i.e., plant used for laying the eggs, also serves as a food source for development of the larvae).

The primary threats to the Puerto Rican harlequin butterfly are development, habitat fragmentation, and other natural or manmade factors such as human-induced fires, use of herbicides and pesticides, vegetation management, and climate change. These factors would substantially affect the distribution and abundance of the species, as well as its habitat. In addition, the lack of effective enforcement makes the existing policies and regulations inadequate for the protection of the species' habitat. These threats are imminent because known populations occur in areas that are subject to development, increased traffic, and increased road maintenance and construction. The threats are high in magnitude, because they cause direct population-level impacts during all life stages.

These threats are expected to continue and potentially increase in the foreseeable future. Therefore, we assign a LPN of 2 to the Puerto Rican harlequin butterfly.

Clifton Cave beetle (*Pseudanophthalmus caecus*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Icebox Cave beetle (*Pseudanophthalmus frigidus*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule or not-warranted finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Louisville Cave beetle (*Pseudanophthalmus troglodytes*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to

making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Tatum Cave beetle (*Pseudanophthalmus parvus*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Rattlesnake-master borer moth (*Papaipema eryngii*) — Rattlesnake-master borer moths are obligate residents of undisturbed prairie remnants, savanna, and pine barrens that contain their only food plant – rattlesnake-master (*Eryngium yuccifolium*). The rattlesnake-master borer moth is known from 16 sites in 5 States: Illinois, Arkansas, Kentucky, Oklahoma, and North Carolina. Currently 12 of the sites contain extant populations, 3 contain populations with unknown status, and 1 contains a population that is considered extirpated.

Although the rattlesnake-master plant is widely distributed across 26 States and is a common plant in remnant prairies, it is a conservative species, meaning it is not found

in disturbed areas, and occurs in low densities. The habitat range for the rattlesnake-master borer moth is very narrow and appears to be limiting for the species. The ongoing effects of habitat loss, fragmentation, degradation, and modification from agriculture, development, flooding, invasive species, and secondary succession have resulted in fragmented populations and population declines. Rattlesnake-master borer moths are affected by habitat fragmentation and population isolation. Almost all of the sites with extant populations of the rattlesnake-master borer moth are isolated from one another, with the populations in Kentucky, North Carolina, and Oklahoma occurring within a single site for each State, thus precluding recolonization from other populations. These small, isolated populations are likely to become unviable over time due to lower genetic diversity which reduces their ability to adapt to environmental change, effects of stochastic events, and inability to recolonize areas where they are extirpated.

Rattlesnake-master borer moths have life-history traits that make them more susceptible to outside stressors. They are univoltine (having a single flight per year), do not disperse widely, and are monophagous (have only one food source). The life history of the species makes it particularly sensitive to fire, which is the primary practice used in prairie management. The species is only safe from fire once it bores into the root of the host plant, which makes adult, egg, and first larval stages subject to mortality during prescribed burns and wildfires. Fire and grazing cause direct mortality to the moth and destroy food plants if the intensity, extent, or timing is not carefully managed. Although fire management is a threat to the species, lack of management is also a threat, and at least one site has become extirpated likely because of the succession to woody habitat.

The species is sought after by collectors and the host plant is very easy to identify, making the moth susceptible to collection, and thus many sites are kept undisclosed to the public.

Existing regulatory mechanisms provide protection for 12 of the 16 sites containing rattlesnake-master borer moth populations. Illinois' endangered species statute provides regulatory mechanisms to protect the species from potential impacts from actions such as development and collection on the 10 Illinois sites; however, illegal collections of the species have occurred at two sites. A permit is required for collection by site managers within the sites in North Carolina and Oklahoma. The rattlesnake-master borer moth is also listed as endangered in Kentucky by the State's Nature Preserves Commission; however, at this time the Kentucky legislature has not enacted any statute that provides legal protection for species that are State listed as threatened or endangered. There are no statutory mechanisms in place to protect the populations in North Carolina, Arkansas, or Oklahoma.

Some threats that the rattlesnake-master moth faces are high in magnitude, such as habitat conversion and fragmentation, and population isolation. These threats with the highest magnitude occur in many of the populations throughout the species' range, but although they are likely to affect each population at some time, they are not likely to affect all of the populations at any one time. Other threats, such as agricultural and nonagricultural development, mortality from implementation of some prairie management tools (such as fire), flooding, succession, and climate change, are of moderate to low magnitude. For example, the life history of rattlesnake-master borer

moths makes them highly sensitive to fire, which can cause mortality of individuals through most of the year and can affect entire populations. Conversely, complete fire suppression can also be a threat to rattlesnake-master borer moths as prairie habitat declines and woody or invasive species become established such that the species' only food plant is not found in disturbed prairies. Although these threats can cause direct and indirect mortality of the species, they are of moderate or low magnitude because they affect only some populations throughout the range and to varying degrees. Overall, the threats are moderate. The threats are imminent because they are ongoing; every known population of rattlesnake-master borer moth has at least one ongoing threat, and some have several working in tandem. Thus, we assigned a LPN of 8 to this species.

Stephan's riffle beetle (*Heterelmis stephani*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Arapahoe snowfly (*Arsapnia arapahoe*) — The following summary is based on information contained in our files. This insect is a winter stonefly associated with clean, cool, running waters. Adult snowflies emerge in late winter from the space underneath stream ice. Until 2013, the Arapahoe snowfly had been confirmed in only two streams

(Elkhorn Creek and Young Gulch), both of which are small tributaries of the Cache la Poudre River in the Roosevelt National Forest, Larimer County, Colorado. However, the species has not been identified in Young Gulch since 1986; it is likely that either the habitat became unsuitable or other unknown causes extirpated the species. Habitats at Young Gulch were further degraded by the High Park Fire in 2012, and potentially by a flash flood disaster in September 2013. New surveys completed in 2013 and 2014 identified the Arapahoe snowfly in seven new localities, including Elkhorn Creek, Sheep Creek (a tributary of the Big Thompson River), Central Gulch (a tributary of Saint Vrain Creek), and Bummer's Gulch, Martin Gulch, and Bear Canyon Creek (tributaries of Boulder Creek in Boulder County). However, numbers of specimens collected at each location were extremely low. These new locations occur on Forest Service land, Boulder County Open Space, and private land. We note that the scientific name for Arapahoe snowfly has changed from *Capnia arapahoe* to *Arsapnia arapahoe* due to recent genetic analyses.

Climate change is a threat to the Arapahoe snowfly, and modifies its habitats by reducing snowpacks, altering streamflows, increasing water temperatures, fostering mountain pine beetle outbreaks, and increasing the frequency of destructive wildfires. Limited dispersal capabilities, a restricted range, dependence on pristine habitats, and a small population size make the Arapahoe snowfly vulnerable to demographic stochasticity, environmental stochasticity, and random catastrophes. Furthermore, regulatory mechanisms appear inadequate to reduce these threats, which may act cumulatively to affect the species. The threats to the Arapahoe snowfly are high in

magnitude because they occur throughout the species' limited range. However, the threats are nonimminent. While limited dispersal capabilities, restricted range, dependence on pristine habitats, and small population size are characteristics that make this species vulnerable to stochastic events and catastrophic events (and potential impacts from climate change), these events are not currently occurring and increased temperatures will adversely affect the species in the future. Therefore, we have assigned the Arapahoe snowfly an LPN of 5.

Meltwater lednian stonefly (*Lednia tumana*) — The following summary is based on information contained in our files and in the petition we received on July 30, 2007. This species is an aquatic insect in the order Plecoptera (stoneflies). Stoneflies are primarily associated with clean, cool streams and rivers. Eggs and nymphs (juveniles) of the meltwater lednian stonefly are found in high-elevation alpine and subalpine streams, most typically in locations closely linked to glacial runoff. The species is generally restricted to streams with mean summer water temperature less than 10 °C (50 °F). The only known meltwater lednian stonefly occurrences are within Glacier National Park (NP), Montana.

Climate change, and the associated effects of glacier loss (with glaciers predicted to be gone by 2030)— including reduced streamflows, and increased water temperatures—are expected to significantly reduce the occurrence of populations and extent of suitable habitat for the species in Glacier NP. In addition, the existing regulatory mechanisms are not adequate to address these environmental changes due to global climate change. We determined that the meltwater lednian stonefly was a

candidate for listing in a warranted-but-precluded 12-month petition finding published on April 5, 2011 (76 FR 18684). We have assigned the species an LPN of 5, based on three criteria: (1) The high magnitude of threat, which is projected to substantially reduce the amount of suitable habitat relative to the species' current range; (2) the low immediacy of the threat based on the lack of documented evidence that climate change is affecting stonefly habitat; and (3) the taxonomic status of the species, which is a full species.

Highlands tiger beetle (*Cicindela highlandensis*) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Flowering plants

Artemisia borealis var. *wormskioldii* (northern wormwood) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor

new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Astragalus microcymbus (Skiff milkvetch) — The following summary is based on information contained in our files and in the petition we received on July 30, 2007. Skiff milkvetch is a perennial forb that dies back to the ground every year. It has a very limited range and a spotty distribution within Gunnison and Saguache Counties in Colorado, where it is found in open, park-like landscapes in the sagebrush-steppe ecosystem on rocky or cobbly, moderate-to-steep slopes of hills and draws.

The most significant threats to skiff milkvetch are recreation, roads, trails, and habitat fragmentation and degradation. Existing regulatory mechanisms are not adequate to protect the species from these threats. Recreational impacts are likely to increase, given the close proximity of skiff milkvetch to the town of Gunnison and the increasing popularity of mountain biking, motorcycling, and all-terrain vehicles. Furthermore, the Hartman Rocks Recreation Area draws users, and contains over 40 percent of the skiff milkvetch units. Other threats to the species include residential and urban development; livestock, deer, and elk use; climate change; increasing periodic drought; nonnative, invasive cheatgrass; and wildfire. The threats to skiff milkvetch are moderate in magnitude, because, while serious and occurring rangewide, they do not collectively result in population declines on a short time scale. The threats are imminent, because the species is currently facing them in many portions of its range. Therefore, we have assigned skiff milkvetch an LPN of 8.

Astragalus schmolliae (Chapin Mesa milkvetch) — The following summary is based on information provided by Mesa Verde National Park and Colorado Natural Heritage Program, contained in our files, and in the petition we received on July 30, 2007. Chapin Mesa milkvetch is a narrow endemic perennial plant that grows in the mature pinyon-juniper woodland of mesa tops on Chapin Mesa in the Mesa Verde National Park and in the adjoining Ute Mountain Ute Tribal Park in southern Colorado. The species was previously known by the common name Schmoll's milkvetch, but we have adopted the newly accepted common name Chapin Mesa milkvetch in this document.

The most significant threats to the species are degradation of habitat by fire, followed by invasion by nonnative cheatgrass and subsequent increase in fire frequency. These threats currently affect about 40 percent of the species' entire known range. Cheatgrass is likely to increase given its rapid spread and persistence in habitat disturbed by wildfires, fire and fuels management, development of infrastructure, and the inability of land managers to control it on a landscape scale. Other threats to Chapin Mesa milkvetch include fires, fire break clearings, and drought, and existing regulatory mechanisms are not adequate to address these threats. The threats to the species overall are imminent and moderate in magnitude, because the species is currently facing them in many portions of its range, but the threats do not collectively result in population declines on a short time scale. Therefore, we have assigned Chapin Mesa milkvetch an LPN of 8.

Boechnera pusilla (Fremont County rockcress) — The following summary is based on information in our files and in the petition received on July 24, 2007. Fremont County

rockcress is a perennial herb that occupies sparsely vegetated, coarse granite soil pockets in exposed granite-pegmatite outcrops, with slopes generally less than 10 degrees, at an elevation between 2,438 and 2,469 m (8,000 and 8,100 ft). The only known population of Fremont County rockcress is located in Wyoming on lands administered by the Bureau of Land Management in the southern foothills of the Wind River Range. The population is made up of at least 8 subpopulations. Fremont County rockcress is likely restricted in distribution by the limited occurrence of pegmatite (a very coarse-grained rock formed from magma or lava) in the area. The specialized habitat requirements of Fremont County rockcress have allowed the plant to persist without competition from other herbaceous plants or sagebrush-grassland species that are present in the surrounding landscape.

Fremont County rockcress has a threat that is not identified, but that is indicated by the small and overall declining population size. Although the threat is not fully understood, we know it exists as indicated by the declining population. The overall population size may be declining from a variety of unknown causes, with drought or disease possibly contributing to the trend. The downward trend may have been leveled off somewhat recently, but without improved population numbers, the species may reach a population level at which other stressors become threats. We are unable to determine how climate change may affect the species in the future. To the extent that we understand the species, other potential habitat-related threats have been removed through the implementation of Federal regulatory mechanisms and associated actions. Overutilization, predation, and the inadequacy of regulatory mechanisms are not viewed

as threats to the species. The threats that Fremont County rockcress faces are moderate in magnitude, primarily because of the recent leveling off of the population decline. The threat to Fremont County rockcress is imminent, because we have evidence that the species is currently facing a threat indicated by a reduced population size. The threat appears to be ongoing, although we are unsure of the extent and timing of its effects on the species. Thus, we have assigned *B. pusilla* an LPN of 8.

Chamaesyce deltoidea ssp. *pinetorum* (Pineland sandmat) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Chorizanthe parryi var. *fernandina* (San Fernando Valley spineflower) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make

prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Cirsium wrightii (Wright's marsh thistle) — The following summary is based on information from the 12-month warranted-but-precluded finding published November 4, 2010 (75 FR 67925), as well as any new information gathered since then. Wright's marsh thistle is a flowering plant in the sunflower family. It is prickly with short black spines and a 3-to 8-foot (ft) (0.9-to 2.4-meter (m)) single stalk covered with succulent leaves. Flowers are white to pale pink in areas of the Sacramento Mountains, but are vivid pink in all the Pecos Valley locations. There are eight general confirmed locations of Wright's marsh thistle in New Mexico: Santa Rosa, Guadalupe County; Bitter Lake National Wildlife Refuge, Chaves County; Blue Spring, Eddy County; La Luz Canyon, Karr Canyon, Silver Springs, and Tularosa Creek, Otero County; and Alamosa Creek, Socorro County. Wright's marsh thistle has been extirpated from all previously known locations in Arizona, and was misidentified and likely not ever present in Texas. The status of the species in Mexico is uncertain, with few verified collections.

Wright's marsh thistle faces threats primarily from natural and human-caused modifications of its habitat due to ground and surface water depletion, drought, invasion of *Phragmites australis*, and from the inadequacy of existing regulatory mechanisms. The species occupies relatively small areas of seeps, springs, and wetland habitat in an arid region plagued by drought and ongoing and future water withdrawals in the surrounding watershed. The species' highly specific requirements of saturated soils with surface or subsurface water flow make it particularly vulnerable.

Long-term drought, in combination with ground and surface water withdrawal, pose a current and future threat to Wright's marsh thistle and its habitat. In addition, we expect that these threats will likely intensify in the foreseeable future. However, the threats are moderate in magnitude because the majority of the threats (habitat loss and degradation due to alteration of the hydrology of its rare wetland habitat), while serious and occurring rangewide, do not at this time collectively and significantly adversely affect the species at a population level. All of the threats are ongoing and therefore imminent. Thus, we continue to assign an LPN of 8 to Wright's marsh thistle.

Dalea carthagenensis ssp. *floridana* (Florida prairie-clover) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Dichanthelium hirstii (Hirst Brothers' panic grass) — See above summary under

Listing Priority Changes in Candidates.

Digitaria pauciflora (Florida pineland crabgrass) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to

publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Eriogonum soredium (Frisco buckwheat) — The following summary is based on information in our files and the petition we received on July 30, 2007. Frisco buckwheat is a narrow endemic perennial plant restricted to soils derived from Ordovician limestone outcrops. The range of the species is less than 5 sq mi (13 sq km), with four known populations. All four populations occur exclusively on private lands in Beaver County, Utah, and each population occupies a very small area with high densities of plants. Available population estimates are highly variable and inaccurate due to the limited access for surveys associated with private lands.

The primary threat to Frisco buckwheat is habitat destruction from precious metal and gravel mining. Mining for precious metals historically occurred within the vicinity of all four populations. Three of the populations are currently in the immediate vicinity of active limestone quarries. Ongoing mining in the species' habitat has the potential to extirpate one population in the near future and extirpate all populations in the foreseeable future. Ongoing exploration for precious metals and gravel indicate that mining will continue, but it will take time for the mining operations to be put into place. This will result in the loss and fragmentation of Frisco buckwheat populations over a longer time scale. Other threats to the species include nonnative species in conjunction with surface

disturbance from mining activities. Existing regulatory mechanisms are inadequate to protect the species from these threats. Vulnerabilities of the species include small population size and climate change. The threats that Frisco buckwheat faces are moderate in magnitude, because while serious and occurring rangewide, the threats do not significantly reduce populations on a short time scale. The threats are imminent, because three of the populations are currently in the immediate vicinity of active limestone quarries. Therefore, we have assigned Frisco buckwheat an LPN of 8.

Festuca ligulata (Guadalupe fescue) — We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a thorough review of all available data and expect to publish either a proposed listing rule or a 12-month not warranted finding prior to making the next annual resubmitted petition 12-month finding. In the course of preparing a proposed listing rule or not warranted petition finding, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Lepidium ostleri (Ostler's peppergrass) — The following summary is based on information in our files and the petition we received on July 30, 2007. Ostler's peppergrass is a long-lived perennial herb in the mustard family that grows in dense, cushion-like tufts. Ostler's peppergrass is a narrow endemic restricted to soils derived from Ordovician limestone outcrops. The range of the species is less than 5 sq mi (13 sq km), with only four known populations. All four populations occur exclusively on private lands in the southern San Francisco Mountains of Beaver County, Utah.

Available population estimates are highly variable and inaccurate due largely to the limited access for surveys associated with private lands.

The primary threat to Ostler's peppergrass is habitat destruction from precious metal and gravel mining. Mining for precious metals historically occurred within the vicinity of all four populations. Three of the populations are currently in the immediate vicinity of active limestone quarries, but mining is only currently occurring in the area of one population. Ongoing mining in the species' habitat has the potential to extirpate one population in the future. Ongoing exploration for precious metals and gravel indicate that mining will continue, but will take time for the mining operations to be put into place. This will result in the loss and fragmentation of Ostler's peppergrass populations over a longer time scale. Other threats to the species include nonnative species, vulnerability associated with small population size, and climate change. Existing regulatory mechanisms are inadequate to protect the species from these threats. The threats that Ostler's peppergrass faces are moderate in magnitude, because, while serious and occurring rangewide, the threats do not collectively result in significant population declines on a short time scale. The threats are imminent because the species is currently facing them across its entire range. Therefore, we have assigned Ostler's peppergrass an LPN of 8.

Pinus albicaulis (whitebark pine) — See above summary under **Listing Priority Changes in Candidates**.

Solanum conocarpum (marron bacora) — The following summary is based on information in our files and in the petition we received on November 21, 1996.

Solanum conocarpum is a dry-forest shrub in the island of St. John, U.S. Virgin Islands. Its current distribution includes eight localities in the island of St. John, each ranging from 1 to 144 individuals. The species has been reported to occur on dry, poor soils. It can be locally abundant in exposed topography on sites disturbed by erosion, areas that have received moderate grazing, and around ridgelines as an understory component in diverse woodland communities. A habitat suitability model suggests that the vast majority of *Solanum conocarpum* habitat is found in the lower elevation coastal scrub forest. Efforts have been conducted to propagate the species to enhance natural populations, and planting of seedlings has been conducted in the island of St. John.

Solanum conocarpum is threatened by the lack of natural recruitment, absence of dispersers, fragmented distribution, lack of genetic variation, climate change, and habitat destruction or modification by exotic mammal species. These threats are evidenced by the reduced number of individuals, low number of populations, and lack of connectivity between populations. Overall, the threats are of high magnitude because they are leading to population declines for a species that already has low population numbers and fragmented distribution; the threats are also ongoing and therefore imminent. Therefore, we assigned a LPN of 2 to *Solanum conocarpum*.

Streptanthus bracteatus (bracted twistflower) – The following summary is based on information obtained from our files, on-line herbarium databases, surveys and monitoring data, seed collection data, and scientific publications. Bracted twistflower, an annual herbaceous plant of the Brassicaceae (mustard family), is endemic to a small portion of the Edwards Plateau of Texas. The Texas Natural Diversity Database, as

revised on April 12, 2012, lists 16 element occurrences (EOs; i.e., populations) that were documented from 1989 to 2010 in five counties. Currently, nine EOs remain with intact habitat, two EOs are partially intact, two are on managed rights-of-way, and three sites have been developed and the populations are presumed extirpated. Only seven of the nine intact EOs and portions of two EOs are in protected natural areas. Four extant EOs are vulnerable to development and other impacts. Five EOs have been partially or completely developed, including two EOs that were destroyed in 2012 and 2013, respectively.

The continued survival of bracted twistflower is imminently threatened by habitat destruction from urban development, severe herbivory from dense herds of white-tailed deer and other herbivores, and the increased density of woody plant cover. Additional ongoing threats include erosion and trampling from foot and mountain-bike trails, a pathogenic fungus of unknown origin, and inadequate protection by existing regulations. Furthermore, due to the small size and isolation of remaining populations, and lack of gene flow between them, several populations are now inbred and may have insufficient genetic diversity for long-term survival. Bracted twistflower populations often occur in habitats that also support the endangered golden-cheeked warbler, but the two species may require different vegetation management. Bracted twistflower is potentially threatened by as-yet unknown impacts of climate change. The Service has established a voluntary memorandum of agreement with Texas Parks and Wildlife Department, the City of Austin, Travis County, the Lower Colorado River Authority, and the Lady Bird Johnson Wildflower Center to protect bracted twistflower and its habitats on tracts of

Balcones Canyonlands Preserve. Overall, the threats to bracted twistflower are of moderate magnitude because most of the populations occur on protected land where the threats will be managed through the MOA. The threats are ongoing and, therefore, imminent. We maintain a LPN of 8 for this species.

Trifolium friscanum (Frisco clover) — The following summary is based on information in our files and the petition we received on July 30, 2007. Frisco clover is a narrow endemic perennial herb found only in Utah, with five known populations restricted to sparsely vegetated, pinion-juniper sagebrush communities and shallow, gravel soils derived from volcanic gravels, Ordovician limestone, and dolomite outcrops. The majority (68 percent) of Frisco clover plants occur on private lands, with the remaining plants found on Federal and State lands.

On the private and State lands, the most significant threat to Frisco clover is habitat destruction from mining for precious metals and gravel. Active mining claims, recent prospecting, and an increasing demand for precious metals and gravel indicate that mining in Frisco clover habitats will increase in the foreseeable future, likely resulting in the loss of large numbers of plants. Other threats to Frisco clover include nonnative, invasive species in conjunction with surface disturbance from mining activities. Existing regulatory mechanisms are inadequate to protect the species from these threats. Vulnerabilities of the species include small population size and climate change. The threats to Frisco clover are moderate in magnitude because, while serious and occurring rangewide, they are not acting independently or cumulatively to have a highly significant negative impact on its survival or reproductive capacity. For example, although mining

for precious metals and gravel historically occurred throughout Frisco clover's range, and mining operations may eventually expand into occupied habitats, there are no active mines within the immediate vicinity of any known population. The threats are imminent because the species is currently facing them across its entire range. Therefore, we have assigned Frisco clover an LPN of 8.

Petitions To Reclassify Species Already Listed

We previously made warranted-but-precluded findings on three petitions seeking to reclassify threatened species to endangered status. The taxa involved in the reclassification petitions are one population of the grizzly bear (*Ursus arctos horribilis*), delta smelt (*Hypomesus transpacificus*), and *Sclerocactus brevispinus* (Pariette cactus). Because these species are already listed under the ESA, they are not candidates for listing and are not included in Table 1. However, this notice and associated species assessment forms or 5-year review documents also constitute the findings for the resubmitted petitions to reclassify these species. Our updated assessments for these species are provided below. We find that reclassification to endangered status for one grizzly bear ecosystem population, delta smelt, and *Sclerocactus brevispinus* are all currently warranted but precluded by work identified above (see ***Findings for Petitioned Candidate Species***, above). One of the primary reasons that the work identified above is considered to have higher priority is that the grizzly bear population, delta smelt, and *Sclerocactus brevispinus* are currently listed as threatened, and therefore already receive

certain protections under the ESA. In accordance with our regulations at 50 C.F.R. 17.31 and 50 C.F.R. 17.71, respectively, these wildlife and plant species are protected by the take prohibitions under section 9. It is therefore unlawful for any person, among other prohibited acts, to take (i.e., to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such activity) any of these wildlife species. In addition, it is unlawful under section 9 for any person, among other prohibited acts, to remove or reduce to possession any of these listed plants from an area under Federal jurisdiction (50 CFR 17.61). Other protections that apply to these threatened species even before we complete proposed and final reclassification rules include those under section 7(a)(2) of the ESA, whereby Federal agencies must insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species.

Grizzly bear (*Ursus arctos horribilis*) - North Cascades ecosystem population (Region 6) — Since 1990, we have received and reviewed five petitions requesting a change in status for the North Cascades grizzly bear population (55 FR 32103, August 7, 1990; 56 FR 33892, July 24, 1991; 57 FR 14372, April 20, 1992; 58 FR 43856, August 18, 1993; 63 FR 30453, June 4, 1998). In response to these petitions, we determined that grizzly bears in the North Cascade ecosystem warrant a change to endangered status. In 2015, we continue to find that reclassifying this population as endangered is warranted but precluded, and we continue to assign a LPN of 3 for the uplisting of the North Cascades population based on high magnitude threats, including very small population size, incomplete habitat protection measures (motorized access

management), and population fragmentation resulting in genetic isolation. The threats are high in magnitude because the limiting factor for this population is human-caused mortality and extremely small population size and as human populations continue to grow, it is inevitable that this will put additional pressures on grizzly bear populations. The threats are ongoing, and thus imminent. However, higher priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude reclassifying grizzly bears in this ecosystem. Furthermore, proposed rules to reclassify threatened species to endangered are a lower priority than listing currently unprotected species (i.e., candidate species), since species currently listed as threatened are already afforded the protection of the ESA and the implementing regulations. We continue to monitor this population and will change its status or implement an emergency uplisting if necessary. In 2014, the National Park Service and the Service initiated an environmental impact statement process to evaluate recovery options in the North Cascades. We expect it to take 3 years to complete and evaluate a variety of alternatives, including population augmentation.

Delta smelt (*Hypomesus transpacificus*) (Region 8) (see 75 FR 17667, April 7, 2010, for additional information on why reclassification to endangered is warranted but precluded) — The following summary is based on information contained in our files. In April 2010, we completed a 12-month finding for delta smelt in which we determined that a change in status from threatened to endangered was warranted, although precluded by other high priority listing actions. The primary rationale for reclassifying delta smelt

from threatened to endangered was the significant declines in delta smelt abundance that have occurred since 2001. Delta smelt abundance, as indicated by the Fall Mid-Water Trawl survey, was exceptionally low between 2004 and 2010, increased during the wet year of 2011, and decreased again to a very a low levels in 2012, 2013 and 2014.

The primary threats to the delta smelt are direct entrainments by State and Federal water export facilities, summer and fall increases in salinity and water clarity resulting from decreases in freshwater flow into the estuary, and effects from introduced species. Ammonia in the form of ammonium may also be a significant threat to the survival of the delta smelt. Additional potential threats are predation by striped and largemouth bass and inland silversides, contaminants, and small population size. Existing regulatory mechanisms have not proven adequate to halt the decline of delta smelt since the time of listing as a threatened species.

However, higher-priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude reclassifying the delta smelt. Furthermore, proposed rules to reclassify threatened species to endangered are a lower priority than listing currently unprotected species (i.e., candidate species), since species currently listed as threatened are already afforded the protection of the ESA and the implementing regulations.

As a result of our analysis of the best available scientific and commercial data, we have retained the recommendation of uplisting the delta smelt to an endangered species with a LPN of 2, based on high magnitude and imminent threats. The magnitude of the

threats is high, because the threats occur rangewide and result in mortality or significantly reduce the reproductive capacity of the species and they are, in some cases (i.e., nonnative species), considered irreversible. Threats are imminent because they are ongoing.

Sclerocactus brevispinus (Pariette cactus) (Region 6) (see 72 FR 53211, September 18, 2007, and the species assessment form (see **ADDRESSES**) for additional information on why reclassification to endangered is warranted but precluded) — Pariette cactus is restricted to clay badlands of the Uinta geologic formation in the Uinta Basin of northeastern Utah. The species is restricted to one population with an overall range of approximately 16 mi by 5 mi in extent. The species' entire population is within a developed and expanding oil and gas field. The location of the species' habitat exposes it to destruction from road, pipeline, and well-site construction in connection with oil and gas development. The species may be collected as a specimen plant for horticultural use. Recreational off-road vehicle use and livestock trampling are additional potential threats. The species is currently federally listed as threatened (44 FR 58868, October 11, 1979; 74 FR 47112, September 15, 2009). The threats are of a high magnitude, because any one of the threats has the potential to severely affect the survival of this species, a narrow endemic with a highly limited range and distribution. Threats are ongoing and, therefore, are imminent. Thus, we assigned an LPN of 2 to this species for uplisting. However, higher-priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude reclassifying the Pariette

cactus. Furthermore, proposed rules to reclassify threatened species to endangered are a lower priority than listing currently unprotected species (i.e., candidate species), since species currently listed as threatened are already afforded the protection of the ESA and the implementing regulations.

Current Notice of Review

We gather data on plants and animals native to the United States that appear to merit consideration for addition to the Lists of Endangered and Threatened Wildlife and Plants (Lists). This notice identifies those species that we currently regard as candidates for addition to the Lists. These candidates include species and subspecies of fish, wildlife, or plants, and DPSs of vertebrate animals. This compilation relies on information from status surveys conducted for candidate assessment and on information from State Natural Heritage Programs, other State and Federal agencies, knowledgeable scientists, public and private natural resource interests, and comments received in response to previous notices of review.

Tables 1 and 2 list animals arranged alphabetically by common names under the major group headings, and list plants alphabetically by names of genera, species, and relevant subspecies and varieties. Animals are grouped by class or order. Plants are subdivided into two groups: (1) Flowering plants and (2) ferns and their allies. Useful synonyms and subgeneric scientific names appear in parentheses with the synonyms preceded by an “equals” sign. Several species that have not yet been formally described

in the scientific literature are included; such species are identified by a generic or specific name (in italics), followed by “sp.” or “ssp.” We incorporate standardized common names in these notices as they become available. We sort plants by scientific name due to the inconsistencies in common names, the inclusion of vernacular and composite subspecific names, and the fact that many plants still lack a standardized common name.

Table 1 lists all candidate species, plus species currently proposed for listing under the ESA. We emphasize that in this notice we are not proposing to list any of the candidate species; rather, we will develop and publish proposed listing rules for these species in the future. We encourage State agencies, other Federal agencies, and other parties to give consideration to these species in environmental planning.

In Table 1, the “category” column on the left side of the table identifies the status of each species according to the following codes:

PE – Species proposed for listing as endangered. Proposed species are those species for which we have published a proposed rule to list as endangered or threatened in the **Federal Register**. This category does not include species for which we have withdrawn or finalized the proposed rule.

PT – Species proposed for listing as threatened.

PSAT – Species proposed for listing as threatened due to similarity of appearance.

C – Candidates: Species for which we have on file sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened. Issuance of proposed rules for these species is precluded at present by other higher priority listing actions. This category includes species for which we made a 12-month warranted-but-precluded finding on a petition to list. We made new findings on all petitions for which we previously made “warranted-but-precluded” findings. We identify the species for which we made a continued warranted-but-precluded finding on a resubmitted petition by the code “C*” in the category column (see the *Findings for Petitioned Candidate Species* section for additional information).

The “Priority” column indicates the LPN for each candidate species, which we use to determine the most appropriate use of our available resources. The lowest numbers have the highest priority. We assign LPNs based on the immediacy and magnitude of threats, as well as on taxonomic status. We published a complete description of our listing priority system in the **Federal Register** (48 FR 43098, September 21, 1983).

The third column, “Lead Region,” identifies the Regional Office to which you should direct information, comments, or questions (see addresses under **Request for Information** at the end of the **SUPPLEMENTARY INFORMATION** section).

Following the scientific name (fourth column) and the family designation (fifth column) is the common name (sixth column). The seventh column provides the known historical range for the species or vertebrate population (for vertebrate populations, this is the historical range for the entire species or subspecies and not just the historical range for the distinct population segment), indicated by postal code abbreviations for States and U.S. territories. Many species no longer occur in all of the areas listed.

Species in Table 2 of this notice are those we included either as proposed species or as candidates in the previous CNOR (published December 5, 2014, at 79 FR 72450) that are no longer proposed species or candidates for listing. Since December 5, 2014, we listed 31 species, withdrew 1 species from proposed status, and removed 23 species from the candidate list. The first column indicates the present status of each species, using the following codes (not all of these codes may have been used in this CNOR):

E – Species we listed as endangered.

T – Species we listed as threatened.

Rc – Species we removed from the candidate list, because currently available information does not support a proposed listing.

Rp – Species we removed from the candidate list, because we have withdrawn the proposed listing.

The second column indicates why the species is no longer a candidate or proposed species, using the following codes (not all of these codes may have been used in this CNOR):

A – Species that are more abundant or widespread than previously believed and species that are not subject to the degree of threats sufficient that the species is a candidate for listing (for reasons other than that conservation efforts have removed or reduced the threats to the species).

F – Species whose range no longer includes a U.S. territory.

I – Species for which the best available information on biological vulnerability and threats is insufficient to support a conclusion that the species is a threatened species or an endangered species.

L – Species we added to the Lists of Endangered and Threatened Wildlife and Plants.

M – Species we mistakenly included as candidates or proposed species in the last notice of review.

N – Species that are not listable entities based on the ESA’s definition of “species” and current taxonomic understanding.

U – Species that are not subject to the degree of threats sufficient to warrant issuance of a proposed listing and therefore are not candidates for listing, due, in part or totally, to conservation efforts that remove or reduce the threats to the species.

X – Species we believe to be extinct.

The columns describing lead region, scientific name, family, common name, and historical range include information as previously described for Table 1.

Request for Information

We request you submit any further information on the species named in this notice as soon as possible or whenever it becomes available. We are particularly interested in any information:

- (1) Indicating that we should add a species to the list of candidate species;
- (2) Indicating that we should remove a species from candidate status;
- (3) Recommending areas that we should designate as critical habitat for a species, or indicating that designation of critical habitat would not be prudent for a species;

- (4) Documenting threats to any of the included species;
- (5) Describing the immediacy or magnitude of threats facing candidate species;
- (6) Pointing out taxonomic or nomenclature changes for any of the species;
- (7) Suggesting appropriate common names; and
- (8) Noting any mistakes, such as errors in the indicated historical ranges.

Submit information, materials, or comments regarding a particular species to the Regional Director of the Region identified as having the lead responsibility for that species. The regional addresses follow:

Region 1. Hawaii, Idaho, Oregon, Washington, American Samoa, Guam, and Commonwealth of the Northern Mariana Islands. Regional Director (TE), U.S. Fish and Wildlife Service, Eastside Federal Complex, 911 N.E. 11th Avenue, Portland, OR 97232-4181 (503/231-6158).

Region 2. Arizona, New Mexico, Oklahoma, and Texas. Regional Director (TE), U.S. Fish and Wildlife Service, 500 Gold Avenue SW., Room 4012, Albuquerque, NM 87102 (505/248-6920).

Region 3. Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Regional Director (TE), U.S. Fish and Wildlife Service, 5600 American Blvd. West, Suite 990, Bloomington, MN 55437-1458 (612/713-5334).

Region 4. Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the U.S. Virgin Islands. Regional Director (TE), U.S. Fish and Wildlife Service, 1875 Century Boulevard, Suite 200, Atlanta, GA 30345 (404/679-4156).

Region 5. Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. Regional Director (TE), U.S. Fish and Wildlife Service, 300 Westgate Center Drive, Hadley, MA 01035-9589 (413/253-8615).

Region 6. Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. Regional Director (TE), U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, CO 80225-0486 (303/236-7400).

Region 7. Alaska. Regional Director (TE), U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, AK 99503-6199 (907/786-3505).

Region 8. California and Nevada. Regional Director (TE), U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W2606, Sacramento, CA 95825 (916/414-6464).

We will provide information received to the Region having lead responsibility for

each candidate species mentioned in the submission. We will likewise consider all information provided in response to this CNOR in deciding whether to propose species for listing and when to undertake necessary listing actions (including whether emergency listing under section 4(b)(7) of the ESA is appropriate). Information and comments we receive will become part of the administrative record for the species, which we maintain at the appropriate Regional Office.

Public Availability of Comments

Before including your address, phone number, email address, or other personal identifying information in your submission, be advised that your entire submission — including your personal identifying information — may be made publicly available at any time. Although you can ask us in your submission to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Authority

This notice is published under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: 12/15/2015

Signed: Stephen Guertin

Acting Director, Fish and Wildlife Service.

Billing Code 4333–15

Table 1. Candidate Notice of Review (Animals and Plants)**Note: See end of SUPPLEMENTARY INFORMATION for an explanation of symbols used in this table.**

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
MAMMALS						
PE	3	R1	<i>Emballonura semicaudata semicaudata</i>	Emballonuridae	Bat, Pacific sheath-tailed (American Samoa DPS)	U.S.A. (AS), Fiji, Independent Samoa, Tonga, Vanuatu
C*	6	R2	<i>Tamias minimus atristriatus</i>	Sciuridae	Chipmunk, Peñasco least	U.S.A. (NM)
PT	6	R8	<i>Martes pennanti</i>	Mustelidae	Fisher (west coast DPS)	U.S.A. (CA, CT, IA, ID, IL, IN, KY, MA, MD, ME, MI, MN, MT, ND, NH, NJ, NY, OH, OR, PA, RI, TN, UT, VA, VT, WA, WI, WV, WY), Canada
C*	3	R8	<i>Vulpes vulpes necator</i>	Canidae	Fox, Sierra Nevada red (Sierra Nevada DPS)	U.S.A. (CA, OR)
C*	5	R1	<i>Urocitellus washingtoni</i>	Sciuridae	Squirrel, Washington ground	U.S.A. (WA, OR)
C*	9	R1	<i>Arborimus longicaudus</i>	Cricetidae	Vole, Red (north Oregon coast DPS)	U.S.A. (OR)
C*	9	R7	<i>Odobenus rosmarus</i>	Odobenidae	Walrus, Pacific	U.S.A. (AK), Russian

			<i>divergens</i>			Federation (Kamchatka and Chukotka)
BIRDS						
C*	3	R1	<i>Porzana tabuensis</i>	Rallidae	Crake, spotless (American Samoa DPS)	U.S.A. (AS), Australia, Fiji, Independent Samoa, Marquesas, Philippines, Society Islands, Tonga
PE	9	R1	<i>Gallicolumba stairi</i>	Columbidae	Ground-dove, friendly (American Samoa DPS)	U.S.A. (AS), Independent Samoa
PE	2	R1	<i>Gymnomyza samoensis</i>	Meliphagidae	Ma'oma'o	U.S.A. (AS), Independent Samoa
C*	5	R8	<i>Synthliboramphus hypoleucus</i>	Alcidae	Murrelet, Xantus's	U.S.A. (CA), Mexico
C*	2	R2	<i>Amazona viridigenalis</i>	Psittacidae	Parrot, red-crowned	U.S.A. (TX), Mexico
C*	8	R6	<i>Anthus spragueii</i>	Motacillidae	Pipit, Sprague's	U.S.A. (AR, AZ, CO, KS, LA, MN, MS, MT, ND, NE, NM, OK, SD, TX), Canada, Mexico
PE	3	R1	<i>Oceanodroma castro</i>	Hydrobatidae	Storm-petrel, band-rumped (Hawaii DPS)	U.S.A. (HI), Atlantic Ocean, Ecuador (Galapagos Islands), Japan
PT	11	R4	<i>Dendroica angelae</i>	Emberizidae	Warbler, elfin-woods	U.S.A. (PR)
REPTILES						
PT	8	R3	<i>Sistrurus catenatus</i>	Viperidae	Massasauga (= rattlesnake), eastern	U.S.A. (IA, IL, IN, MI, MN, MO, NY, OH, PA, WI),

						Canada
C*	5	R4	<i>Pituophis ruthveni</i>	Colubridae	Snake, Louisiana pine	U.S.A. (LA, TX)
C*	8	R4	<i>Gopherus polyphemus</i>	Testudinidae	Tortoise, gopher (eastern population)	U.S.A. (AL, FL, GA, LA, MS, SC)
C*	6	R2	<i>Kinosternon sonoriense longifemorale</i>	Kinosternidae	Turtle, Sonoyta mud	U.S.A. (AZ), Mexico
AMPHIBIANS						
C*	8	R8	<i>Lithobates onca</i>	Ranidae	Frog, relict leopard	U.S.A. (AZ, NV, UT)
C*	8	R4	<i>Notophthalmus perstriatus</i>	Salamandridae	Newt, striped	U.S.A. (FL, GA)
C*	8	R4	<i>Gyrinophilus gulolineatus</i>	Plethodontidae	Salamander, Berry Cave	U.S.A. (TN)
C	3	R2	<i>Hyla wrightorum</i>	Hylidae	Treefrog, Arizona (Huachuca/Canelo DPS)	U.S.A. (AZ), Mexico (Sonora)
C*	2	R4	<i>Necturus alabamensis</i>	Proteidae	Waterdog, black warrior (=Sipsey Fork)	U.S.A. (AL)
FISHES						
PT	8	R2	<i>Gila nigra</i>	Cyprinidae	Chub, headwater	U.S.A. (AZ, NM)
PT	9	R2	<i>Gila robusta</i>	Cyprinidae	Chub, roundtail (Lower Colorado River Basin DPS)	U.S.A. (AZ, CO, NM, UT, WY)
C*	11	R6	<i>Etheostoma cragini</i>	Percidae	Darter, Arkansas	U.S.A. (AR, CO, KS, MO, OK)
PE	2	R5	<i>Crystallaria cincotta</i>	Percidae	Darter, diamond	U.S.A. (KY, OH, TN, WV)

PT	2	R4	<i>Etheostoma spilotum</i>	Percidae	Darter, Kentucky arrow	U.S.A. (KY)
C*	8	R4	<i>Percina aurora</i>	Percidae	Darter, Pearl	U.S.A. (LA, MS)
C*	5	R4	<i>Moxostoma</i> sp.	Catostomidae	Redhorse, sicklefin	U.S.A. (GA, NC, TN)
C*	3	R8	<i>Spirinchus thaleichthys</i>	Osmeridae	Smelt, longfin (San Francisco Bay–Delta DPS)	U.S.A. (AK, CA, OR, WA), Canada
PSAT	N/A	R1	<i>Salvelinus malma</i>	Salmonidae	Trout, Dolly Varden	U.S.A. (AK, WA), Canada, East Asia
CLAMS						
C*	2	R2	<i>Lampsilis bracteata</i>	Unionidae	Fatmucket, Texas	U.S.A. (TX)
C*	2	R2	<i>Truncilla macrodon</i>	Unionidae	Fawnsfoot, Texas	U.S.A. (TX)
C*	8	R2	<i>Popenaias popei</i>	Unionidae	Hornshell, Texas	U.S.A. (NM, TX), Mexico
PT	—	R4	<i>Medionidus walkeri</i>	Unionidae	Moccasinshell, Suwannee	U.S.A. (FL, GA)
C*	8	R2	<i>Quadrula aurea</i>	Unionidae	Orb, golden	U.S.A. (TX)
C*	8	R2	<i>Quadrula houstonensis</i>	Unionidae	Pimpleback, smooth	U.S.A. (TX)
C*	2	R2	<i>Quadrula petrina</i>	Unionidae	Pimpleback, Texas	U.S.A. (TX)
SNAILS						
C*	8	R4	<i>Elimia melanoides</i>	Pleuroceridae	Mudalia, black	U.S.A. (AL)
C*	2	R4	<i>Planorbella magnifica</i>	Planorbidae	Ramshorn, magnificent	U.S.A. (NC)

PE	2	R1	<i>Eua zebrina</i>	Partulidae	Snail, no common name	U.S.A. (AS)
PE	2	R1	<i>Ostodes strigatus</i>	Potaridae	Snail, no common name	U.S.A. (AS)
C*	11	R2	<i>Pyrgulopsis thompsoni</i>	Hydrobiidae	Springsnail, Huachuca	U.S.A. (AZ), Mexico
INSECTS						
PE	2	R1	<i>Hylaeus anthracinus</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
PE	2	R1	<i>Hylaeus assimulans</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
PE	2	R1	<i>Hylaeus facilis</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
PE	2	R1	<i>Hylaeus hiliaris</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
PE	2	R1	<i>Hylaeus kuakea</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
PE	2	R1	<i>Hylaeus longiceps</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
PE	2	R1	<i>Hylaeus mana</i>	Colletidae	Bee, Hawaiian yellow-faced	U.S.A. (HI)
C*	5	R8	<i>Lycaena hermes</i>	Lycaenidae	Butterfly, Hermes copper	U.S.A. (CA)
C*	2	R4	<i>Atlantea tulita</i>	Nymphalidae	Butterfly, Puerto Rican harlequin	U.S.A. (PR)

C*	5	R4	<i>Pseudanophthalmus caecus</i>	Carabidae	Cave beetle, Clifton	U.S.A. (KY)
C*	5	R4	<i>Pseudanophthalmus frigidus</i>	Carabidae	Cave beetle, icebox	U.S.A. (KY)
C*	5	R4	<i>Pseudanophthalmus troglodytes</i>	Carabidae	Cave beetle, Louisville	U.S.A. (KY)
C*	5	R4	<i>Pseudanophthalmus parvus</i>	Carabidae	Cave beetle, Tatum	U.S.A. (KY)
PE	8	R1	<i>Megalagrion xanthomelas</i>	Coenagrionidae	Damselfly, orangeblack Hawaiian	U.S.A. (HI)
C*	8	R3	<i>Papaipema eryngii</i>	Noctuidae	Moth, rattlesnake-master borer	U.S.A. (AR, IL, KY, NC, OK)
C*	11	R2	<i>Heterelmis stephani</i>	Elmidae	Riffle beetle, Stephan's	U.S.A. (AZ)
C*	5	R6	<i>Arsapnia (=Capnia) arapahoe</i>	Capniidae	Snowfly, Arapahoe	U.S.A. (CO)
C*	5	R6	<i>Lednia tumana</i>	Nemouridae	Stonefly, meltwater lednian	U.S.A. (MT)
C*	5	R4	<i>Cicindela highlandensis</i>	Cicindelidae	Tiger beetle, highlands	U.S.A. (FL)
CRUSTACEANS						
C	8	R5	<i>Stygobromus kenki</i>	Crangonyctidae	Amphipod, Kenk's	U.S.A. (DC)
PE	—	R5	<i>Cambarus callainus</i>	Cambaridae	Crayfish, Big Sandy	U.S.A. (KY, VA, WV)
PE	—	R5	<i>Cambarus veteranus</i>	Cambaridae	Crayfish, Guyandotte River	U.S.A. (WV)
PE	5	R1	<i>Procaris hawaiiiana</i>	Procarididae	Shrimp, anchialine pool	U.S.A. (HI)

FLOWERING PLANTS						
PT	11	R4	<i>Argythamnia blodgettii</i>	Euphorbiaceae	Silverbush, Blodgett's	U.S.A. (FL)
C*	3	R1	<i>Artemisia borealis</i> var. <i>wormskioldii</i>	Asteraceae	Wormwood, northern	U.S.A. (OR, WA)
C*	8	R6	<i>Astragalus microcymbus</i>	Fabaceae	Milkvetch, skiff	U.S.A. (CO)
C*	8	R6	<i>Astragalus schmolliae</i>	Fabaceae	Milkvetch, Chapin Mesa	U.S.A. (CO)
C*	8	R6	<i>Boechera (Arabis) pusilla</i>	Brassicaceae	Rockcress, Fremont County or small	U.S.A. (WY)
PE	2	R1	<i>Calamagrostis expansa</i>	Poaceae	Reedgrass, Maui	U.S.A. (HI)
PE	9	R4	<i>Chamaecrista lineata</i> var. <i>keyensis</i>	Fabaceae	Pea, Big Pine partridge	U.S.A. (FL)
C*	12	R4	<i>Chamaesyce deltoidea</i> <i>pinetorum</i>	Euphorbiaceae	Sandmat, pineland	U.S.A. (FL)
PE	9	R4	<i>Chamaesyce deltoidea</i> <i>serpyllum</i>	Euphorbiaceae	Spurge, wedge	U.S.A. (FL)
C*	6	R8	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	Polygonaceae	Spineflower, San Fernando Valley	U.S.A. (CA)
C*	8	R2	<i>Cirsium wrightii</i>	Asteraceae	Thistle, Wright's	U.S.A. (AZ, NM), Mexico
PE	2	R1	<i>Cyanea kauaulaensis</i>	Campanulaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Cyperus neokunthianus</i>	Cyperaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Cyrtandra hematos</i>	Gesneriaceae	Haiwale	U.S.A. (HI)
C*	3	R4	<i>Dalea carthagenensis</i> var.	Fabaceae	Prairie-clover, Florida	U.S.A. (FL)

			<i>floridana</i>			
C*	2	R5	<i>Dichantheium hirstii</i>	Poaceae	Panic grass, Hirst Brothers'	U.S.A. (DE, GA, NC, NJ)
C*	5	R4	<i>Digitaria pauciflora</i>	Poaceae	Crabgrass, Florida pineland	U.S.A. (FL)
C*	8	R6	<i>Eriogonum soledium</i>	Polygonaceae	Buckwheat, Frisco	U.S.A. (UT)
PE	2	R1	<i>Exocarpos menziesii</i>	Santalaceae	Heau	U.S.A. (HI)
PE	2	R1	<i>Festuca hawaiiensis</i>	Poaceae	No common name	U.S.A. (HI)
C*	11	R2	<i>Festuca ligulata</i>	Poaceae	Fescue, Guadalupe	U.S.A. (TX), Mexico
PE	2	R1	<i>Gardenia remyi</i>	Rubiaceae	Nanu	U.S.A. (HI)
PE	3	R1	<i>Joinvillea ascendens ascendens</i>	Joinvilleaceae	Ohe	U.S.A. (HI)
PE	2	R1	<i>Kadua (=Hedyotis) fluviatilis</i>	Rubiaceae	Kampuaa	U.S.A. (HI)
PE	2	R1	<i>Kadua hauptensis</i>	Rubiaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Labordia lorenciana</i>	Loganiaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Lepidium orbiculare</i>	Brassicaceae	Anaunau	U.S.A. (HI)
C*	8	R6	<i>Lepidium ostleri</i>	Brassicaceae	Peppergrass, Ostler's	U.S.A. (UT)
PE	—	R1	<i>Lepidium papilliferum</i>	Brassicaceae	Peppergrass, slickspot	U.S.A. (ID)
PE	5	R4	<i>Linum arenicola</i>	Linaceae	Flax, sand	U.S.A. (FL)
PE	2	R1	<i>Myrsine fosbergii</i>	Myrsinaceae	Kolea	U.S.A. (HI)
PE	2	R1	<i>Nothocestrum latifolium</i>	Solanaceae	Aiea	U.S.A. (HI)

PE	2	R1	<i>Ochrosia haleakalae</i>	Apocynaceae	Holei	U.S.A. (HI)
PE	2	R1	<i>Phyllostegia brevidens</i>	Lamiaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Phyllostegia helleri</i>	Lamiaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Phyllostegia stachyoides</i>	Lamiaceae	No common name	U.S.A. (HI)
C*	8	R6	<i>Pinus albicaulis</i>	Pinaceae	Pine, whitebark	U.S.A. (CA, ID, MT, NV, OR, WA, WY), Canada (AB, BC)
PT	8	R4	<i>Platanthera integrilabia</i>	Orchidaceae	Orchid, white fringeless	U.S.A. (AL, GA, KY, MS, NC, SC, TN, VA)
PE	2	R1	<i>Portulaca villosa</i>	Portulacaceae	Ihi	U.S.A. (HI)
PE	2	R1	<i>Pritchardia bakeri</i>	Arecaceae	Loulu (=Loulu lelo)	U.S.A. (HI)
PE	3	R1	<i>Pseudognaphalium</i> (= <i>Gnaphalium</i>) <i>sandwicensium</i> var. <i>molokaiense</i>	Asteraceae	Enaena	U.S.A. (HI)
PE	2	R1	<i>Ranunculus hawaiiensis</i>	Ranunculaceae	Makou	U.S.A. (HI)
PE	2	R1	<i>Ranunculus mauiensis</i>	Ranunculaceae	Makou	U.S.A. (HI)
PE	2	R1	<i>Sanicula sandwicensis</i>	Apiaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Santalum involutum</i>	Santalaceae	Iliahi	U.S.A. (HI)
PE	3	R1	<i>Schiedea diffusa</i> ssp. <i>diffusa</i>	Caryophyllaceae	No common name	U.S.A. (HI)
PE	2	R1	<i>Schiedea pubescens</i>	Caryophyllaceae	Maolioli	U.S.A. (HI)
PE	2	R1	<i>Sicyos lanceoloides</i>	Cucurbitaceae	Anunu	U.S.A. (HI)

PE	2	R1	<i>Sicyos macrophyllus</i>	Cucurbitaceae	Anunu	U.S.A. (HI)
C	12	R4	<i>Sideroxylon reclinatum</i> <i>austrofloridense</i>	Sapotaceae	Bully, Everglades	U.S.A. (FL)
C*	2	R4	<i>Solanum conocarpum</i>	Solanaceae	Bacora, marron	U.S.A. (PR)
PE	8	R1	<i>Solanum nelsonii</i>	Solanaceae	Popolo	U.S.A. (HI)
PE	3	R1	<i>Stenogyne kaalae</i> ssp. <i>sherffii</i>	Lamiaceae	No common name	U.S.A. (HI)
C*	8	R2	<i>Streptanthus bracteatus</i>	Brassicaceae	Twistflower, bracted	U.S.A. (TX)
C*	8	R6	<i>Trifolium friscanum</i>	Fabaceae	Clover, Frisco	U.S.A. (UT)
PE	2	R1	<i>Wikstroemia skottsbergiana</i>	Thymelaceae	Akia	U.S.A. (HI)
FERNS AND ALLIES						
PE	2	R1	<i>Asplenium diellaciniatum</i>	Aspleniaceae	No common name	U.S.A. (HI)
PE	8	R1	<i>Cyclosorus boydiae</i>	Thelypteridaceae	Kupukupu makalii	U.S.A. (HI)
PE	2	R1	<i>Deparia kaalaana</i>	Athyraceae	No common name	U.S.A. (HI)
PE	3	R1	<i>Dryopteris glabra</i> var. <i>pusilla</i>	Dryopteridaceae	Hohiu	U.S.A. (HI)
PE	3	R1	<i>Hypolepis hawaiiensis</i> var. <i>mauiensis</i>	Dennstaedtiaceae	Olua	U.S.A. (HI)
PE	2	R1	<i>Huperzia</i> (= <i>Phlegmariurus</i>) <i>stemmermanniae</i>	Lycopodiaceae	No common name	U.S.A. (HI)
PE	3	R1	<i>Microlepia strigosa</i> var. <i>mauiensis</i> (= <i>Microlepia</i> <i>mauiensis</i>)	Dennstaedtiaceae	No common name	U.S.A. (HI)

Table 2. Animals and Plants Formerly Candidates or Formerly Proposed for Listing
Note: See end of SUPPLEMENTARY INFORMATION for an explanation of symbols used in this table.

Status		Lead region	Scientific name	Family	Common name	Historical range
Code	Expl.					
MAMMALS						
T	L	R3	<i>Myotis septentrionalis</i>		Bat, northern long-eared	U.S.A. (AL, AR, CT, DE, DC, FL, GA, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NJ, NY, NC, ND, OH, OK, PA, RI, SC, SD, TN, VT, VA, WV, WI, WY); Canada (AB, BC, LB, MB, NB, NF, NS, NT, ON, PE, QC, SK, YT)
E	L	R1	<i>Emballonura semicaudata rotensis</i>	Emballonuridae	Bat, Pacific sheath-tailed (Mariana Islands subspecies)	U.S.A. (GU, CNMI)
Rc	U	R5	<i>Sylvilagus transitionalis</i>	Leporidae	Cottontail, New	U.S.A. (CT, MA,

					England	ME, NH, NY, RI, VT)
Rc	U	R1	<i>Uroditellus endemicus</i>	Sciuridae	Squirrel, Southern Idaho ground	U.S.A. (ID)
E	L	R2	<i>Canis lupus baileyi</i>	Canidae	Wolf, Mexican gray	U.S.A. (AZ, NM)
BIRDS						
T	L	R5	<i>Calidris canutus rufa</i>	Scolopacidae	Knot, red	U.S.A. (Atlantic coast), Canada, South America
Rc	U	R6	<i>Centrocercus urophasianus</i>	Phasianidae	Sage-grouse, greater	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK)
Rp	U	R8	<i>Centrocercus urophasianus</i>	Phasianidae	Sage-grouse, greater (Bi-State DPS)	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK)
Rc	N	R1	<i>Centrocercus urophasianus</i>	Phasianidae	Sage-grouse, greater (Columbia Basin DPS)	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK)
E	L	R6	<i>Centrocercus minimus</i>	Phasianidae	Sage-grouse, Gunnison	U.S.A. (AZ, CO, NM, UT)

REPTILES						
E	L	R1	<i>Emoia slevini</i>	Scincidae	Skink, Slevin's (Guali'ek Halom Tano)	U.S.A. (Guam, Mariana Islands)
T	L	R4	<i>Pituophis melanoleucus lodingi</i>	Colubridae	Snake, black pine	U.S.A. (AL, LA, MS)
Rc	A	R2	<i>Gopherus morafkai</i>	Testudinidae	Tortoise, Sonoran desert	U.S.A. (AZ, CA, NV, UT)
AMPHIBIANS						
Rc	U	R8	<i>Rana luteiventris</i>	Ranidae	Frog, Columbia spotted (Great Basin DPS)	U.S.A. (AK, ID, MT, NV, OR, UT, WA, WY), Canada (BC)
FISHES						
Rc	A	R4	<i>Etheostoma sagitta</i>	Percidae	Darter, Cumberland arrow	U.S.A. (KY, TN)
SNAILS						
E	L	R1	<i>Samoana fragilis</i>	Partulidae	Snail, fragile tree	U.S.A. (GU, MP)
E	L	R1	<i>Partula radiolata</i>	Partulidae	Snail, Guam tree	U.S.A. (GU)
E	L	R1	<i>Partula gibba</i>	Partulidae	Snail, Humped tree	U.S.A. (GU, MP)
E	L	R1	<i>Partula langfordi</i>	Partulidae	Snail, Langford's tree	U.S.A. (MP)
Rc	U	R2	<i>Pyrgulopsis morrisoni</i>	Hydrobiidae	Springsnail, Page	U.S.A. (AZ)
INSECTS						

E	L	R1	<i>Hypolimnas octucula mariannensis</i>	Nymphalidae	Butterfly, Mariana eight-spot	U.S.A. (GU, MP)
E	L	R1	<i>Vagrans egistina</i>	Nymphalidae	Butterfly, Mariana wandering	U.S.A. (GU, MP)
Rc	A	R4	<i>Glyphopsyche sequatchie</i>	Limnephilidae	Caddisfly, Sequatchie	U.S.A. (TN)
Rc	A	R4	<i>Pseudanopthalmus insularis</i>	Carabidae	Cave beetle, Baker Station (= insular)	U.S.A. (TN)
Rc	A	R4	<i>Pseudanopthalmus colemanensis</i>	Carabidae	Cave beetle, Coleman	U.S.A. (TN)
Rc	A	R4	<i>Pseudanopthalmus fowlerae</i>	Carabidae	Cave beetle, Fowler's	U.S.A. (TN)
Rc	A	R4	<i>Pseudanopthalmus tiresias</i>	Carabidae	Cave beetle, Indian Grave Point (= Soothsayer)	U.S.A. (TN)
Rc	A	R4	<i>Pseudanopthalmus inquisitor</i>	Carabidae	Cave beetle, inquirer	U.S.A. (TN)
Rc	A	R4	<i>Pseudanopthalmus paulus</i>	Carabidae	Cave beetle, Noblett's	U.S.A. (TN)
E	L	R1	<i>Ischnura luta</i>	Coenagrionidae	Damselfly, Rota blue	U.S.A. (Mariana Islands)
Rc	U	R8	<i>Ambrysus funebris</i>	Naucoridae	Naucorid bug (=Furnace Creek), Nevares Spring	U.S.A. (CA)

T	L	R3	<i>Hesperia dacotae</i>	Hesperiidae	Skipper, Dakota	U.S.A. (MN, IA, IL, SD, ND), Canada
E	L	R3	<i>Oarisma poweshiek</i>	Hesperiidae	Skipperling, Poweshiek	U.S.A. (IA, IL, IN, MI, MN, ND, SD, WI), Canada (MB)
CRUSTACEANS						
Rc	I	R1	<i>Metabetaeus lohena</i>	Alpheidae	Shrimp, anchialine pool	U.S.A. (HI)
Rc	I	R1	<i>Palaemonella burnsi</i>	Palaemonidae	Shrimp, anchialine pool	U.S.A. (HI)
FLOWERING PLANTS						
Rc	U	R8	<i>Abronia alpina</i>	Nyctaginaceae	Sand-verbena, Ramshaw Meadows	U.S.A. (CA)
Rc	U	R6	<i>Astragalus anserinus</i>	Fabaceae	Milkvetch, Goose Creek	U.S.A. (ID, NV, UT)
Rc	A	R6	<i>Astragalus tortipes</i>	Fabaceae	Milkvetch, Sleeping Ute	U.S.A. (CO)
E	L	R1	<i>Bulbophyllum guamense</i>	Orchidaceae	Cebello halumtano	U.S.A. (Guam, Mariana Islands)
Rc	U	R8	<i>Calochortus persistens</i>	Liliaceae	Mariposa lily, Siskiyou	U.S.A. (CA, OR)
T	L	R1	<i>Cycas micronesica</i>	Cycadaceae	Fadang	U.S.A. (Guam, Mariana Islands)
E	L	R1	<i>Dendrobium guamens</i>	Orchidaceae	No common name	U.S.A. (Guam,

						Mariana Islands)
E	L	R1	<i>Eugenia bryanii</i>	Myrtaceae	No common name	U.S.A. (Guam)
E	L	R1	<i>Hedyotis megalantha</i>	Rubiaceae	Paudedo	U.S.A. (Guam)
E	L	R1	<i>Heritiera longipetiolata</i>	Malvaceae	Ufa-halomtano	U.S.A. (Guam, Mariana Islands)
E	L	R1	<i>Maesa walkeri</i>	Primulaceae	No common name	U.S.A. (Guam, Mariana Islands)
E	L	R1	<i>Nervilia jacksoniae</i>	Orchidaceae	No common name	U.S.A. (Guam, Mariana Islands)
E	L	R1	<i>Phyllanthus saffordii</i>	Phyllanthaceae	No common name	U.S.A. (Guam)
E	L	R1	<i>Psychotria malaspinae</i>	Rubiaceae	Aplokating-palaoan	U.S.A. (Guam)
Rc	U	R8	<i>Rorippa subumbellata</i>	Brassicaceae	Cress, Tahoe yellow	U.S.A. (CA, NV)
E	L	R1	<i>Solanum guamense</i>	Solanaceae	Bereng-henas halomtano	U.S.A. (Guam, Mariana Islands)
E	L	R1	<i>Tinospora homosepala</i>	Menispermaceae	No common name	U.S.A (Guam)
T	L	R1	<i>Tabernaemontana rotensis</i>	Apocynaceae	No common name	U.S.A. (Guam, Mariana Islands)
E	L	R1	<i>Tuberolabium guamense</i>	Orchidaceae	No common name	U.S.A. (Guam, Mariana Islands)
FERNS AND ALLIES						
E	L	R4	<i>Trichomanes punctatum floridanum</i>	Hymenophyllaceae	Florida bristle fern	U.S.A. (FL)

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