DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R9–ES–2010–0065; MO–9221050083–B2]

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, 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.

The CNOR summarizes the status and threats that we evaluated in order to determine that species qualify as candidates and to assign a listing priority number (LPN) to each species or to determine that 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, previously called candidate forms) for each candidate species.

Overall, this CNOR recognizes five new candidates, changes the LPN for four candidates, and removes one 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 251.

This document also includes our findings on resubmitted petitions and describes our progress in revising the Lists of Endangered and Threatened Wildlife and Plants during the period October 1, 2009, through September 30, 2010.

We request additional status information that may be available for the 251 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 Candidate Conservation, Arlington, VA (*see* address below), or on our Web site (*http://ecos.fws.gov/tess_public/pub/SpeciesReport.do?listingType=C&mapstatus=1*). Please submit any new information, materials, comments, or questions of a general nature on this notice to the Arlington, VA, address listed below. 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.**

FOR FURTHER INFORMATION CONTACT: The Endangered Species Coordinator(s) in the appropriate Regional Office(s), or Chief, Branch of Candidate Conservation, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, Room 420, Arlington, VA 22203 (telephone 703–358–2171; facsimile 703–358–1735). Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) 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.

You may submit your information concerning this notice in general or for any of the species included in this notice by one of the methods listed in the **ADDRESSES** section.

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 Candidate Conservation, Arlington, VA (*see* address above).

Candidate Notice of Review

Background

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), 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 Act, an endangered species is any species which is in danger of extinction throughout all or a significant portion of its range, and a threatened species is any species which 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 to list 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 on our own initiative, or after we have made a positive finding on a petition to list a species, in particular we have found that listing is warranted but precluded by other higher priority listing action (*see* the Petition Findings section, below).

We maintain this list of candidates for a variety of reasons: To notify the public that these species are facing threats to their survival; to provide advance knowledge of potential listings that could affect decisions of environmental planners and developers; to provide information that may stimulate and guide conservation efforts that will remove or reduce threats to these species and possibly make listing unnecessary; to request input from interested parties to help us identify those candidate species that may not

require protection under the Act or additional species that may require the Act's protections; and to request necessary information for setting priorities for preparing listing proposals. We strongly 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 Web site, *http://www.fws.gov/endangered/what-we-do/cca.html.*

Previous Notices of Review

We have been publishing candidate notices of review (CNOR) since 1975. The most recent CNOR (prior to this CNOR) was published on November 9, 2009 (74 FR 57804). CNORs published since 1994 are available on our Web site, *http://www.fws.gov/endangered/what-we-do/cnor.html.* For copies of CNORs published prior to 1994, please contact the Branch of Candidate Conservation (*see* **ADDRESSES** 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 Act (15 U.S.C. 1533(h)(3)) requires the Secretary to establish guidelines for such a priority-ranking guidance 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 time scale (once the threats are imminent) than for species with lower magnitude threats. Since 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: The number of populations and/or extent of range of the species affected by the threat(s); the biological significance of the affected population(s), taking into consideration the life-history characteristics of the species and its current abundance and distribution; 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; 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; whether the effects are likely to be permanent; and the extent to which any ongoing conservation efforts reduce the severity of the threat.

As used in our priority-ranking system, immediacy of threat is categorized as either "imminent" or "nonimminent" and is not a measure of how quickly the species is likely to become extinct if the threats are not addressed; rather, immediacy 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). We also apply this last category to species that are threatened or endangered in only significant portions of their ranges rather than their entire ranges.

The result of the ranking system is that we assign each candidate a listing priority number of 1 to 12. For example, if the threat(s) is 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, DPS, or a species that is threatened or endangered in only a significant portion of its range 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 to list it 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 Web site at: *http://www.fws.gov/endangered/esa-library/pdf/48fr43098-43105.pdf.* For more information on the LPN assigned to a particular species, 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; that information is summarized in this CNOR.

This revised notice supersedes all previous animal, plant, and combined candidate notices of review.

Summary of This CNOR

Since publication of the previous CNOR on November 9, 2009 (74 FR 57804), 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 high 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 first.

In addition to reviewing candidate species since publication of the last CNOR, we have worked on numerous findings in response to petitions to list species, and on proposed and final determinations for rules to list species under the Act. 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 identify five new candidate species (*see New Candidates,* below), change the LPN for four candidates (*see Listing Priority Changes in Candidates,* below) and determine that a listing proposal is not warranted for one species and thus remove it from candidate status (*see*

Candidate Removals, below). Combined with the other decisions published separately from this CNOR for individual species that previously were candidates, a total of 251 species (including 110 plant and 141 animal species) are now candidates awaiting preparation of rules proposing their listing. These 251 species, along with the 18 species currently proposed for listing (includes 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 54 species for which we published a final rule to list, plus the 1 species that we have determined does not meet the definition of endangered or threatened and therefore does not warrant listing. We have removed this species from candidate status in this CNOR.

New Candidates

Below we present a brief summary of one new fish, one new snail, one new crustacean, and two new plant candidates, which we are recognizing in this CNOR. Complete information, including references, can be 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 our Web site (*http://ecos.fws.gov/tess_public/pub/SpeciesReport.do?listingType=C&mapstatus=1*). For these species, we find that we have on file sufficient information on biological vulnerability and threats to support a proposal to list as endangered or threatened, but that preparation and publication of a proposal is precluded by higher priority listing actions (*i.e.,* it met our definition of a candidate species). We also note below that nine other species—Sprague's pipit, greater sage-grouse, Bi-State DPS of greater sage-grouse, Gunnison sage-grouse, least chub, upper Missouri River DPS of Arctic grayling, Tucson shovel-nosed snake, Jemez Mountains salamander, and *Agave eggersiana*—were identified as candidates earlier this year as a result of separate petition findings published in the **Federal Register.**

Birds

Sprague's pipit (*Anthus spragueii*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on September 14, 2010 (75 FR 56028).

Greater sage-grouse (*Centrocercus urophasianus*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on March 23, 2010 (75 FR 13910).

Greater sage-grouse, Bi-State DPS (*Centrocercus urophasianus)*—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on March 23, 2010 (75 FR 13910).

Gunnison sage-grouse (*Centrocercus minimus*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on September 28, 2010 (75 FR 59803).

Reptiles

Tucson Shovel-Nosed Snake (*Chionactis occipitalis klauberi*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on March 31, 2010 (75 FR 16050).

Amphibians

Jemez Mountains salamander (*Plethodon neomexicanus*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on September 9, 2010 (75 FR 54822).

Fish

Least chub (*Iotichthys phlegethontis*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on June 22, 2010 (75 FR 35398).

Kentucky arrow darter (*Etheostoma sagitta spilotum*)—The following summary is based on information in our files. The Kentucky arrow darter is a rather large (total length of 4.6 inches (116 millimeters)), brightly colored darter that is restricted to the upper Kentucky River basin in eastern Kentucky. The species' preferred habitat consists of pools or transitional areas between riffles and pools (runs and glides) in moderate to high gradient streams with bedrock, boulder, and cobble substrates. In most recent surveys, the Kentucky arrow darter has been observed in streams ranging in size from first to third order, with most individuals occurring in second order streams in watersheds encompassing 7.7 square miles (20 square kilometers) or less. Kentucky arrow darters feed on a variety of aquatic invertebrates, but adults feed predominantly on larval mayflies (order Ephemeroptera), specifically the families Heptageniidae and Baetidae. Rangewide surveys from 2007 to 2009 revealed that the Kentucky arrow darter has disappeared from portions of its range. During these surveys, the species was observed at only 33 of 68 historical streams and 45 of 100 historical sites.

The subspecies' habitat and range have been severely degraded and limited by water pollution from surface coal mining and gas-exploration activities; removal of riparian vegetation; stream channelization; increased siltation associated with poor mining, logging, and agricultural practices; and deforestation of watersheds. The threats are high in magnitude because they are widespread across the subspecies' range. In addition, the magnitude (severity or intensity) of these threats, especially impacts from mining and gas-exploration activities, is high because these activities have the potential to alter stream water quality permanently throughout the range by contributing sediment, dissolved metals, and other solids to streams supporting Kentucky arrow darters, resulting in direct mortality or reduced reproductive capacity. The threats are imminent because the effects are manifested immediately and will continue for the foreseeable future. Consequently, we assigned an LPN of 3 to this subspecies.

Arctic grayling, Missouri River DPS (*Thymallus arcticus*)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on September 8, 2010 (75 FR 54707).

Snails

Rosemont talussnail (*Sonorella rosemontensis*)—the following summary is based on information in our files. The petition we received on June 24, 2010, provided no new information beyond what we had already included in our assessment of this species. The Rosemont talussnail, a land snail in the family Helminthoglyptidae, is known

from three talus slopes in the Santa Rita Mountains, Pima County, Arizona. The primary threat to Rosemont talussnail is hard rock mining. The entire range of the species is located on patented mining claims and can reasonably be expected to be subjected to mining activities in the foreseeable future. Hard rock mining typically involves the blasting of hillsides and the crushing of ore-laden rock. Such activities would kill talussnails and render their habitats unsuitable for occupation. Since mining may occur across the entire range of the species within the foreseeable future, potentially resulting in rangewide habitat destruction and population losses, the threats are of a high magnitude. However, mining on patented mining claims, although a reasonably anticipated action, is neither currently ongoing nor imminent. Although the Rosemont Copper Mine is scheduled to commence as soon as 2011, there exists uncertainty regarding its scope, and therefore its potential effect on habitat of the Rosemont talussnail. Accordingly, we find that overall threats to the Rosemont talussnail are nonimminent and we assign an LPN of 5 to this species.

Crustaceans

Kenk's amphipod (*Stygobromus kenki*)—Amphipods of the genus *Stygobromus,* occur in groundwater and groundwater-related habitats. In the case of Kenk's amphipod, these include seeps, small springs, and possibly wells. Kenk's amphipod is a small, eyeless, unpigmented crustacean adapted for survival in subterranean habitats. It can be found in dead leaves or fine sediment submerged in the waters of its spring/seep outflows. The species is currently known only from five spring or seep sites in Washington, DC, and Montgomery County, Maryland. Four of these sites are within the Rock Creek drainage, and the fifth is within the Northwest Branch drainage.

Within the limited area encompassing the current range of this species, the vast majority of potential expanses of habitat large enough to support this species have been significantly impacted or completely destroyed by urban and suburban development. Kenk's amphipod is now vulnerable because of its limited geographic distribution and infringement of urban development on its habitat. Degradation of water quality and modifications of hydrology are among the principal threats to this species' spring or seep habitats. Specific threats include toxic spills, non-point source pollution, sanitary sewer leaks, excessive stormwater flows, and additional land disturbance. In addition, climate change has the potential to adversely affect the species, particularly if it results in a significant change in the amount of precipitation in the Washington, DC, area.

Although all five known sites of occurrence face threats to the hydrology and water quality of their springs, these threats are chronic in nature and appear to be increasing only gradually and are not currently resulting in major mortality events or impairment of reproduction. Thus, the threats are moderate in magnitude. Several threats are imminent because they are ongoing and expected to continue. Therefore, we assigned this species LPN of 8.

Flowering Plants

Agave eggersiana (no common name)—We previously announced candidate status for this species, and described the reasons and data on which the finding was based, in a separate warranted-but-precluded 12-month petition finding published on September 22, 2010 (75 FR 57720).

Astragalus cusickii var. packardiae (Packard's milkvetch)—The following summary is based on information contained in our files. This plant is a narrow endemic located in northeastern Payette County, Idaho. Its entire known range is only approximately 10 square miles (26 square kilometers). The light-colored, sparsely vegetated sedimentary outcrops to which this species is restricted are found scattered throughout the landscape, but are limited in extent. The size of occupied outcrops ranges from less than 0.04 hectares (0.1 acre) to approximately 1.2 hectares (3 acres). The entire population of *A. cusickii var. packardiae* is currently estimated at 5,000 plants located within 26 occurrences (17 on Bureau of Land Management, 4 on State, and 5 on private land).

The primary threats to *Astragalus cusickii var. packardiae* include wildfire, nonnative invasive plant species, and more recently, off-road vehicle (ORV) use. Vegetation within the range of *A. cusickii var. packardiae* was originally sagebrush-steppe habitat; however, due to habitat impacts from a century of wildfires, livestock use, and invasive nonnative plant species, much of the area has been converted to annual grassland dominated by two nonnative grass species, *Bromus tectorum* (cheatgrass) and *Taeniatherum caput-medusae* (medusahead). Invasive nonnative plants affect *A. cusickii var. packardiae* directly through competition and indirectly by providing continuous fine fuels that contribute to the increased frequency and extent of wildfires.

ORV use, which is currently considered the most immediate threat to *Astragalus cusickii var. packardiae* and its habitat, was not identified as a threat during the original 1999 surveys for this species, but monitoring conducted in 2008 and 2009 indicate it has since become a widespread activity, occurring throughout the limited range of *A. cusickii var. packardiae.* ORVs are traveling directly through outcrops occupied by *A. cusickii var. packardiae,* as well as along the rims, spur ridges, and slope bases that form the margins of the occupied outcrops, with tracks ranging from single passage treads to major hill climbing runways. Based on monitoring data, this use appears to be increasing in scope and has resulted in the crushing of *A. cusickii var. packardiae* plants, as well as accelerated erosion of the fine, loose substrate occupied by this species.

Based on this information, the magnitude of the primary threats to *Astragalus cusickii var. packardiae* and its habitat is high because ORV use, wildfires, and nonnative invasive species affect the species throughout its range, appear to be increasing in extent, and result in severe and direct impacts to individuals and population levels., Because these threats are ongoing throughout *A. cusickii var. packardiae's* limited range, these threats are imminent. Thus, we assign an LPN of 3 to this plant variety.

Mimulus fremontii var. vandenbergensis (Vandenberg monkeyflower)—*Mimulus fremontii var. vandenbergensis* is a small, short-lived annual herb in the Phrymaceae family (no common family name). It ranges from 0.5 to 10 inches (1 to 20 centimeters) tall and produces flowers that are bright yellow with reddish brown markings near the mouth. The seeds are small and numerous, and seed is likely dispersed by the wind as the seed pods open. As with other annual species that are sensitive to annual levels of rainfall, germination of resident seed banks may be low or nonexistent in unfavorable years, with little or no aboveground expression of the species visible.

Mimulus fremontii var. vandenbergensis occurs only in western Santa Barbara County, California, at lower elevations and closer to the coast, in sandy openings of coastal scrub, chaparral, and woodlands on an old dune sheet known as Burton Mesa. Seven populations occur across the mesa over a distance of approximately 6 miles, generally in alignment with the prevailing winds. Two populations

occur on Vandenberg Air Force Base, two occur on State Park lands at La Purisima State Historic Park, two occur primarily on Department of Fish and Game lands on Burton Mesa Ecological Reserve, and one occurs primarily on private lands.

The threats currently facing *Mimulus fremontii var. vandenbergensis* include alteration and destruction of habitat from development and associated secondary impacts, including increased fragmentation, alteration of hydrology, competition with nonnative species, and alteration of fire regimes. The taxon is also threatened with stochastic extinction due to small population size: Of the 7 populations, 3 have supported fewer than 100 individuals based on at least 2 years of observations. We consider competition with nonnative plant species to be the largest and most immediate threat: Veldt grass, pampas grass, bromes, Sahara mustard, star thistle, Italian thistle, and bull thistle are present at various sites where *Mimulus fremontii var. vandenbergensis* occurs. Habitat for one population on private land was graded in 2007 in preparation for construction of a housing development. Construction has been stalled, and in the meantime, veldt grass has become established in the graded lot and has increased the rate at which this species is spreading in adjacent habitat for *Mimulus fremontii var. vandenbergensis,* including the Burton Mesa Ecological Reserve. Veldt grass is also present and rapidly spreading at population sites on Vandenberg Air Force Base and La Purisima State Historic Park.

The threats are of a high magnitude because all three of the largest populations are at risk of being lost from the invasion of nonnative species. The third largest population is also threatened by secondary impacts from a planned development and firefighting activities. Losses of some or all of the three largest populations will increase the risk of extinction of the taxon as a whole because the remaining populations are smaller and more vulnerable to stochastic extirpation, which compounds the other threats these small populations face. The threats are ongoing and, therefore, imminent. Consequently, we have assigned a LPN of 3 to this plant variety.

Listing Priority Changes in Candidates

We reviewed the LPN for all candidate species and are changing the numbers for the following species discussed below. Some of the changes reflect actual changes in either the magnitude or immediacy of the threats. For some species, the LPN change reflects efforts to ensure national consistency as well as closer adherence to the 1983 guidelines in assigning these numbers, rather than an actual change in the nature of the threats.

Snails

Page springsnail (*Pyrgulopsis morrisoni*)—The following summary is based on information contained in our files. The Page springsnail is known to exist only within a complex of springs located within an approximately 0.93-mi (1.5-km) stretch along the west side of Oak Creek around the community of Page Springs, and within springs located along Spring Creek, tributary to Oak Creek, Yavapai County, Arizona.

The primary threat to the Page springsnail is modification of habitat by domestic, agricultural, ranching, fish hatchery, and recreational activities. Many of the springs where the species occurs have been subjected to some level of such modification. Based on recent survey data, it appears that the Page springsnail is abundant within natural habitats and persists in modified habitats, albeit at reduced densities. Arizona Game and Fish Department (AGFD) management plans for the Bubbling Ponds and Page Springs fish hatcheries include commitments to replace lost habitat and to monitor remaining populations of invertebrates such as the Page springsnail. The AGFD and the Service recently entered into a Candidate Conservation Agreement with Assurances that calls for evaluating the restoration and creation of natural springhead integrity, including springs on AGFD properties. In fact, several conservation measures have already been implemented. Also, the National Park Service recently acquired Shea Springs, a site that the Page springsnail occupied historically, and has expressed an interest in restoring natural springhead integrity to that site. Accordingly, implementation of the CCAA reduces the magnitude of threats to a moderate level and greatly reduces the chances of extirpation or extinction. The immediacy of the threat of groundwater withdrawal is uncertain, due to conflicting information regarding imminence. However, overall, the threats are imminent, because modification of the species' habitat by threats other than groundwater withdrawal is currently occurring. Therefore, we are changing the LPN for the Page springsnail from a 2 to an 8.

Flowering Plants

Hibiscus dasycalyx (Neches River rose-mallow)—The following summary is based on information contained in our files. This species, found in eastern Texas, appears to be restricted to those portions of wetlands that are exposed to open sun and normally hold standing water early in the growing season, with water levels dropping during late summer and fall. This habitat has been affected by drainage or filling of floodplain depressions and oxbows, stream channelization, road construction, timber harvesting, agricultural activities (primarily mowing and grazing), and herbicide use. Threats that continue to affect the species include wetland alteration, herbicide use, grazing, mowing during the species' growing and flowering period, and genetic swamping by other *Hibiscus* species.

A 1995 status survey of 10 counties resulted in confirmation of the species at only three sites, but in three separate counties and three different watersheds, suggesting a relatively wide historical range. These three populations were all within highway rights-of-way and vulnerable to herbicides and adjacent agricultural activities. As of 2005, only 20 plants remained at one of these sites. Additional surveys for *Hibiscus dasycalyx* discovered new populations. About 300 plants were found on land owned by Temple-Inland Corporation in east Trinity County. Smaller plant numbers have been seen at this site and in 2005 no plants were observed. This site may be too dry to support this species, possibly due to changes in the wetland's hydrology. Another site discovered on land previously owned by Champion International Corporation (near White Rock Creek in west Trinity County) once supported 300–400 plants. This site was modified in 2007. In west Houston County, a population of 300 to 400 plants discovered on private land has been purchased by the Natural Area Preservation Association in order to protect this land in perpetuity. In east Houston County, a population discovered in Compartment 55 in Davy Crockett National Forest numbered over 1,000 in 2006. In 2000, nearly 800 plants were introduced into Compartments 16 and 20 of Davy Crockett National Forest as part of a reintroduction effort. One population retained high numbers (350 in 2006), but was subjected to high water conditions in 2007 and may have been adversely affected. The second site was affected by a change in hydrology and had declined to 50 plants in 2006. In 2004, 200 plants were placed in a wetland in Compartment 11 of Davy Crockett National Forest, but only 10 plants were seen in 2006. High water from heavy spring and summer rains

prevented further assessment of these rose-mallow sites.

The threats to the species continue to be of a high magnitude because all of the populations are severely affected by some combination of the threats, and the effectiveness of the re-introduction and preservation efforts has not been established. After evaluating the current conditions of the species' habitat, we now find that threats are imminent overall. Threats are currently occurring and ongoing for nearly all of the populations (herbicides and adjacent agricultural activities for the 3 populations identified in 1995, and hydrology alteration and other modifications for the 2 populations in east Trinity County and the 3 populations reintroduced in Davy Crockett National Forest). Thus, in light of this information and to ensure consistency in the application of our listing priority process we have changed the LPN from a 5 to a 2 for the Neches River rose-mallow to reflect imminent threats of high magnitude.

Linum arenicola (Sand flax)—The following summary is based on information contained in our files. Sand flax is found in pine rockland and marl prairie habitats, which require periodic wildfires in order to maintain an open, shrub-free subcanopy and reduce leaf-litter levels. Based upon available data, there are 11 extant occurrences of sand flax; 11 others have been extirpated or destroyed. For the most part, only small and isolated occurrences remain in low lying areas in a restricted range of southern Florida and the Florida Keys. In general, viability is uncertain for 9 of 11 occurrences.

Sand flax is threatened by habitat loss and degradation due to development; climatic changes and sea-level rise, which ultimately are likely to substantially reduce the extent of available habitat; fire suppression and difficulty in applying prescribed fire; road maintenance activities; exotic species; illegal dumping; natural disturbances, such as hurricanes, tropical storms, and storm surges; and the small and fragmented nature of the current population. Reduced pollinator activity and suppression of pollinator populations from pesticides used in mosquito control and decreased seed production due to increased seed predation in a fragmented wildland urban interface may also affect sand flax; however, not enough information is known on this species' reproductive biology or life history to assess these potential threats. Some of the threats to the species—including fire suppression, difficulty in applying prescribed fire, road maintenance activities, exotic species, and illegal dumping—threaten nearly all remaining populations. However, some efforts are under way to use prescribed fire to control exotics on conservation lands where this species occurs.

There are some circumstances that may mitigate the impacts of the threats upon the species. For example, a survey conducted in 2009 showed approximately 74,000 plants on a non-conservation, public site in Miami-Dade County; this is far more plants than was previously known. Although a portion of the plants will be affected by development, approximately 60,000 are anticipated to be protected and managed through a Conservation Easement. Consequently, the majority of the largest occurrence in Miami-Dade County is expected to be conserved and managed. In addition, much of the pine rockland on Big Pine Key, the location of the largest occurrence in the Keys, is protected from development.

Nevertheless, due to the small and fragmented nature of the current population, stochastic events, disease, or genetic bottlenecks may strongly affect this species in the Keys. One example is Hurricane Wilma, which inundated most of the species' habitat on Big Pine Key in 2005, and plants were not found 8–9 weeks post-storm; the density of sand flax declined to zero in all management units at The Nature Conservancy's preserve in 2006. In a 2007 post-hurricane assessment, sand flax was found in northern plots, but not in any of the southern plots on Big Pine Key. More current data are not available.

Overall, the magnitude of threats is high, because the threats affect all 11 known occurrences of the species, and can result in a precipitous decline to the population levels, particularly when combined with the potential impacts from hurricanes or other natural disasters. Because development is not immediate for the majority of the largest population in Miami-Dade County and another population in the Keys is also largely protected from development since much of it is within public and private conservation lands, the threat of habitat loss is now nonimminent. In addition, sea level rise is a long-term threat since we do not have evidence that it is currently affecting any population of sand flax. Therefore, based upon new information (new survey date showing a much larger population of plants), and reduced immediacy of threats, we changed the LPN of this species from a 2 to a 5.

Penstemon scariosus var. *albifluvis* (White River beardtongue)—The following summary is based on information contained in our files and the petition we received on October 27, 1983. This species is restricted to calcareous soils derived from oil shale barrens of the Green River Formation in the Uinta Basin of northeastern Utah and adjacent Colorado. There are 14 occurrences known in Utah and 1 in Colorado. Most of the occupied habitat of the White River beardtongue is within developed and expanding oil and gas fields. The location of the species' habitat exposes it to destruction from road, pipeline, and well site construction in connection with oil and gas development. Recreational off-road vehicle use, heavy grazing by livestock, and wildlife and livestock trampling are additional threats. A future threat (and potentially the greatest threat) to the species is oil shale development.

In the 2009 CNOR, we found the threats were nonimminent and high magnitude. However, traditional oil and gas energy development in the area has expanded into habitat for this species, and therefore the threat is now imminent. In addition, BLM has adopted a Special Status Species policy and has included in its current Resource Management Plan commitments to protect this species. These protections lessen the extent of traditional oil and gas development impacts to this species, so that the threat is now of moderate magnitude. The threat from off-road vehicles is also moderate because BLM limited all vehicles to designated routes, thus avoiding beardtongue habitat. Based on current information, we are changing the LPN from a 6 to a 9 for this plant variety.

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 this species and its habitat. After a review of the best available scientific and commercial data, we conclude that listing this species under the Endangered Species Act is not warranted because the species is not likely to become an endangered species within the foreseeable future throughout all or a significant portion of its' range. Therefore, we find that proposing a rule to list it is not warranted, and we no longer consider it to be a candidate species for listing. We will continue to monitor the status of this species and to accept additional information and comments concerning this finding. We will reconsider our determination in the event that new information indicates that the threats to the species is of a considerably greater magnitude or imminence than identified through

assessments of information contained in our files, as summarized here.

Mammals

Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Palm Springs round-tailed ground squirrel was believed to be limited in range to the Coachella Valley region of Riverside County, California. The primary habitat in the Coachella Valley for round-tailed ground squirrel is the dunes and mesquite hummocks associated with *Prosopis glandulosa* var. *torreyana* (honey mesquite) and to a lesser extent those dunes and hummocks associated with *Larrea tridentata* (creosote), or other vegetation. The primary threat to *X. t. chlorus* in the Coachella Valley was from habitat loss due to urban development and drops in the groundwater table, which eliminated much of the honey mesquite in the Coachella Valley and fragmented habitat occupied by this subspecies. The Coachella Valley Association of Governments (CVAG) developed a Multiple Species Habitat Conservation Plan (MSHCP) that was reviewed and approved by the Service in 2008. Habitat conservation and monitoring actions that have been implemented since 2008 specifically for *X. t. chlorus* have significantly eliminated the threat of urban development to the taxon. To date, conservation for *X. t. chlorus* includes protection of 244 acres of mesquite hummocks as a result of the MSHCP, in addition to 104 acres of mesquite hummocks on conservation lands in existence prior to permitting the MSHCP. Protection of additional habitat (desert shrub communities and other sandy areas with appropriate vegetation known to harbor the subspecies at lower densities) is also anticipated in other portions of the plan area. Although we do not rely upon future implementation of the additional habitat protections anticipated in the MSHCP, we do expect conservation actions specific to *X. t. chlorus* to continue as a result of the commitment by CVAG and the MSHCP.

More significant than the ongoing conservation measures is the fact that recent results of both morphological and genetic studies indicate its range is substantially larger than previously believed. Analysis of experimental samples show *X. t. chlorus* is found in Hinkley Valley and Death Valley, expanding the range at minimum 150 miles northward. Because *X. t. chlorus* is more widespread in its range than was previously understood, and based on our review of the best available information, we no longer conclude that threats across this newly expanded range put the taxon in danger of extinction. Moreover, this subspecies is not endangered or threatened in a significant portion of the range because the conservation actions and current protections provided in Death Valley make it so it is not endangered or threatened in any portion of the range. In summary, the existing conservation provided by MSHCP in the Coachella Valley, along with the data showing the subspecies has an expanded range over which the threats are nonsignificant to the taxon as a whole, we find listing of the Palm Springs round-tailed ground squirrel (*X. t. chlorus*) throughout all or a significant portion of its range is no longer warranted. The subspecies no longer meets our definition of a candidate, and we have removed it from candidate status.

Petition Findings

The Act provides two mechanisms for considering species for listing. One method allows the Secretary, on his own initiative, to identify species for listing under the standards of section 4(a)(1). We implement this 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 petition finding; (2) it serves as a "resubmitted" petition finding that the Act 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 to ascertain if they need emergency listing.

First, the CNOR serves as a petition finding in some instances. Under section 4(b)(3)(A), when we receive a listing petition, 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 and publish one of three possible findings within 12 months of the receipt of the petition (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, section 4(b)(5) and 4(b)(6) 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 of endangered or threatened species. (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 6, 1996). This 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, 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. Since publication of the CNOR in 2009, we received petitions to list three candidate species, the Florida bonneted bat, headwater chub, and Rosemont talussnail (we received this petition after we initiated our assessment of this species for candidate status). We are making substantial 90-day findings and warranted-but-precluded 12-month findings for these species as part of this notice. 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.

Second, the CNOR serves as a "resubmitted" petition finding. Section 4(b)(3)(C)(i) of the Act requires that when we make a warranted-but-precluded finding on a petition, we are to treat such a petition as one that is resubmitted on the date of such a finding. Thus, we must make a 12-month petition finding in compliance with section 4(b)(3)(B) of the Act 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.

Third, through undertaking the analysis requires to complete the CNOR, the Service determines if any candidate species needs emergency listing. Section 4(b)(3)(C)(iii) of the Act 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). 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 annual finding on the status of petitioned species pursuant to section 4(b)(3)(C)(i).

A number of court decisions have elaborated on the nature and specificity of information that must be considered in making and describing the findings in the CNOR. The previous CNOR, which was 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, 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 does preclude action on listing candidate species.

Pursuant to section 4(b)(3)(C)(ii) and the Administrative Procedure Act (5 U.S.C. 551 et seq.), any party with standing may challenge the merits of any not-warranted or warranted-but-precluded petition finding incorporated in this CNOR. The analysis included herein, together with the administrative record for the decision at issue (particularly the supporting species assessment form), will provide an adequate basis for a court to review the petition finding.

Nothing in this document or any of our policies should be construed as in any way modifying the Act's requirement that we make a resubmitted 12-month petition finding for each petitioned candidate within 1 year of the date of publication of this CNOR. If we fail to make any such finding on a timely basis, whether through publication of a new CNOR or some other form of notice, any party with standing may seek judicial review.

In this CNOR, we continue to address the concerns of the courts by including specific information in our discussion on preclusion (*see* below). In preparing this CNOR, we reviewed the current status of, and threats to, the 166 candidates and 5 listed species for which we have received a petition and for which we have found listing or reclassification from threatened to endangered to be warranted but precluded. We also reviewed the current status of, and threats to, the Canada lynx in New Mexico for which we received a petition to add that State to the listed range. 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, pursuant to section 4(b)(3)(B), 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.

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, 2009, through September 30, 2010. 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 Act.

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 Web site: *http://ecos.fws.gov/tess_public/pub/SpeciesReport.do?listingType=C&mapstatus=1.* As described above, under section 4 of the Act we may identify and propose species for listing based on the factors identified in section 4(a)(1), and section 4 also provides a mechanism for the public to petition us to add a species to the lists of threatened species or endangered species under the Act. 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 of endangered or threatened species.

Preclusion and Expeditious Progress

Preclusion is a function of the listing priority of a species in relation to the resources that are available and the cost and relative priority of competing demands for those resources. 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.

The resources available for listing actions are determined through the annual Congressional appropriations

process. The appropriation for the Listing Program is 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 of Endangered and Threatened Wildlife and Plants (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 Act; 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). 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 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 rule with critical habitat, $345,000; and for a final listing rule with critical habitat, the median cost is $305,000.

We cannot spend more than is appropriated for the Listing Program without violating the Anti-Deficiency Act (*see* 31 U.S.C. 1341(a)(1)(A)). In addition, in FY 1998 and for each fiscal year since then, Congress has placed a statutory cap on funds which may be expended for the Listing Program, equal to the amount expressly appropriated for that purpose in that fiscal year. This cap was designed to prevent funds appropriated for other functions under the Act (for example, recovery funds for removing species from the Lists), or for other Service programs, from being used for Listing Program actions (see House Report 105–163, 105th Congress, 1st Session, July 1, 1997).

Since FY 2002, the Service's budget has included a critical habitat subcap to ensure that some funds are available for other work in the Listing Program ("The critical habitat designation subcap will ensure that some funding is available to address other listing activities" (H.R. No. 107–103, 107th Congress, 1st Session, June 19, 2001)). In FY 2002 and each year until FY 2006, the Service has had to use virtually the entire critical habitat subcap to address court-mandated designations of critical habitat, and consequently none of the critical habitat subcap funds have been available for other listing activities. In FY 2007, we were able to use some of the critical habitat subcap funds to fund proposed listing determinations for high-priority candidate species. In FY 2009, while we were unable to use any of the critical habitat subcap funds to fund proposed listing determinations, we did use some of this money to fund the critical habitat portion of some proposed listing determinations so that the proposed listing determination and proposed critical habitat designation could be combined into one rule, thereby being more efficient in our work. In FY 2010, we are using some of the critical habitat subcap funds to fund listing actions with statutory deadlines.

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 critical habitat subcap, and the amount of funds needed to address court-mandated critical habitat designations, Congress and the courts have in effect determined the amount of money available for other listing activities nationwide. Therefore, the funds in the listing cap, other than those needed to address court-mandated critical habitat for already listed species, represent the resources we must take into consideration when we make our determinations of preclusion and expeditious progress.

Congress identified the availability of resources as the only basis for deferring the initiation of a rulemaking that is warranted. The Conference Report accompanying Public Law 97–304, which established the current statutory deadlines and the warranted-but-precluded finding, states that the amendments were "not intended to allow the Secretary to delay commencing the rulemaking process for any reason other than that the existence of pending or imminent proposals to list species subject to a greater degree of threat would make allocation of resources to such a petition [that is, for a lower-ranking species] unwise." Although that statement appeared to refer specifically to the "to the maximum extent practicable" limitation on the 90-day deadline for making a "substantial information" finding, that finding is made at the point when the Service is deciding whether or not to commence a status review that will determine the degree of threats facing the species, and therefore the analysis underlying the statement is more relevant to the use of the warranted-but-precluded finding, which is made when the Service has already determined the degree of threats facing the species and is deciding whether or not to commence a rulemaking.

In FY 2010, $10,471,000 is the amount of money that Congress appropriated for the Listing Program (that is, the portion of the Listing Program funding not related to critical habitat designations for species that are already listed). Therefore, a proposed listing is precluded if pending proposals with higher priority will require expenditure of at least $10,471,000, and expeditious progress is the amount of work that can be achieved with $10,471,000. Since court orders requiring critical habitat work will not require use of all of the funds within the critical habitat subcap, we are using $1,114,417 of our critical habitat subcap funds in order to work on as many of our required petition findings and listing determinations as possible. This brings the total amount of funds we have for listing action in FY 2010 to $11,585,417.

The $11,585,417 is being used to fund work in the following categories: Compliance with court orders and court-approved settlement agreements requiring that petition findings or listing determinations be completed by a specific date; section 4 (of the Act) listing actions with absolute statutory deadlines; essential litigation-related, administrative, and listing program-management functions; and high-priority listing actions for some of our candidate species. In 2009, the responsibility for listing foreign species under the Act was transferred from the Division of Scientific Authority, International Affairs Program, to the Endangered Species Program. Therefore, starting in FY 2010, a portion of our funding is being used to work on the actions described above as they apply to listing actions for foreign species. This has the potential to further reduce funding available for domestic listing actions. Although there are currently no foreign species issues included in our high-priority listing actions at this time, many actions have statutory or court-approved settlement deadlines, thus increasing their priority. The budget allocations for each specific listing action are identified in the Service's FY

2010 Allocation Table (part of our administrative record).

Based on our September 21, 1983, guidance for assigning an LPN for each candidate species (48 FR 43098), we have a significant number of species with an LPN of 2. Under this guidance, 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), species, or part of a species (subspecies, distinct population segment, or significant portion of the range)). 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).

Because of the large number of high-priority species, we have 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 have had the highest priority to receive funding to work on a proposed listing determination. As we work through proposed and final listing rules for those 40 candidates, we apply the ranking criteria to the next group of candidates with LPNs of 2 and 3 to determine the next set of highest priority candidate species. Finally, proposed rules for reclassification of threatened species to endangered are lower priority, since as listed species, they are already afforded the protection of the Act 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-determined deadline.

With our workload so much bigger than the amount of funds we have to accomplish it, it is important that we be as efficient as possible in our listing process. Therefore, as we 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 a species with an LPN of 2. 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.

Based on these prioritization factors, we continue to find that proposals to list the petitioned candidate species included in Table 1 are all warranted but precluded.

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 of Endangered and Threatened Wildlife and Plants. 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. Given the limited resources available for listing, we find that we made expeditious progress in FY 2010 in the Listing Program. (Although we do not discuss it in detail here, we are making expeditious progress in removing species from the list under the Recovery program in light of the resource available for delisting, which is funded by a separate line item in the budget of the Endangered Species Program. During FY 2010, we have completed two proposed delisting rules and two final delisting rules.) Progress in adding qualified species to the list included preparing and publishing the following determinations:

FY 2010 Completed Listing Actions

Publication date	Title	Actions	FR pages
10/08/2009	Listing *Lepidium papilliferum* (Slickspot Peppergrass) as a Threatened Species Throughout Its Range.	Final Listing Threatened	74 FR 52013–52064.
10/27/2009	90-day Finding on a Petition To List the American Dipper in the Black Hills of South Dakota as Threatened or Endangered.	Notice of 90-day Petition Finding, Not substantial.	74 FR 55177–55180.
10/28/2009	Status Review of Arctic Grayling (*Thymallus arcticus*) in the Upper Missouri River System.	Notice of Intent to Conduct Status Review for Listing Decision.	74 FR 55524–55525.
11/03/2009	Listing the British Columbia Distinct Population Segment of the Queen Charlotte Goshawk Under the Endangered Species Act: Proposed rule.	Proposed Listing Threatened	74 FR 56757–56770.
11/03/2009	Listing the Salmon-Crested Cockatoo as Threatened Throughout Its Range with Special Rule.	Proposed Listing Threatened	74 FR 56770–56791.
11/23/2009	Status Review of Gunnison sage-grouse (*Centrocercus minimus*).	Notice of Intent to Conduct Status Review for Listing Decision.	74 FR 61100–61102.
12/03/2009	12-Month Finding on a Petition to List the Black-tailed Prairie Dog as Threatened or Endangered.	Notice of 12-month petition finding, Not warranted.	74 FR 63343–63366.
12/03/2009	90-Day Finding on a Petition to List Sprague's Pipit as Threatened or Endangered.	Notice of 90-day Petition Finding, Substantial.	74 FR 63337–63343.
12/15/2009	90-Day Finding on Petitions To List Nine Species of Mussels From Texas as Threatened or Endangered With Critical Habitat.	Notice of 90-day Petition Finding, Substantial.	74 FR 66260–66271.
12/16/2009	Partial 90-Day Finding on a Petition to List 475 Species in the Southwestern United States as Threatened or Endangered With Critical Habitat Critical Habitat.	Notice of 90-day Petition Finding, Not substantial and Substantial.	74 FR 66865–66905.

FY 2010 COMPLETED LISTING ACTIONS—Continued

Publication date	Title	Actions	FR pages
12/17/2009	12-month Finding on a Petition To Change the Final Listing of the Distinct Population Segment of the Canada Lynx To Include New Mexico.	Notice of 12-month petition finding, Warranted but precluded.	74 FR 66937–66950.
1/05/2010	Listing Foreign Bird Species in Peru and Bolivia as Endangered Throughout Their Range.	Proposed Listing Endangered	75 FR 605–649.
1/05/2010	Listing Six Foreign Birds as Endangered Throughout Their Range.	Proposed Listing Endangered	75 FR 286–310.
1/05/2010	Withdrawal of Proposed Rule to List Cook's Petrel	Proposed rule, withdrawal	75 FR 310–316.
1/05/2010	Final Rule to List the Galapagos Petrel and Heinroth's Shearwater as Threatened Throughout Their Ranges.	Final Listing Threatened	75 FR 235–250.
1/20/2010	Initiation of Status Review for *Agave eggersiana* and *Solanum conocarpum*.	Notice of Intent to Conduct Status Review for Listing Decision.	75 FR 3190–3191.
2/09/2010	12-month Finding on a Petition to List the American Pika as Threatened or Endangered.	Notice of 12-month petition finding, Not warranted.	75 FR 6437–6471.
2/25/2010	12-Month Finding on a Petition To List the Sonoran Desert Population of the Bald Eagle as a Threatened or Endangered Distinct Population Segment.	Notice of 12-month petition finding, Not warranted.	75 FR 8601–8621.
2/25/2010	Withdrawal of Proposed Rule To List the Southwestern Washington/Columbia River Distinct Population Segment of Coastal Cutthroat Trout (*Oncorhynchus clarki clarki*) as Threatened.	Withdrawal of Proposed Rule to List	75 FR 8621–8644.
3/18/2010	90-Day Finding on a Petition to List the Berry Cave salamander as Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 13068–13071.
3/23/2010	90-Day Finding on a Petition to List the Southern Hickorynut Mussel (*Obovaria jacksoniana*) as Endangered or Threatened.	Notice of 90-day Petition Finding, Not substantial.	75 FR 13717–13720.
3/23/2010	90-Day Finding on a Petition to List the Striped Newt as Threatened.	Notice of 90-day Petition Finding, Substantial.	75 FR 13720–13726.
3/23/2010	12-Month Findings for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 13910–14014.
3/31/2010	12-Month Finding on a Petition to List the Tucson Shovel-Nosed Snake (*Chionactis occipitalis klauberi)* as Threatened or Endangered with Critical Habitat.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 16050–16065.
4/5/2010	90-Day Finding on a Petition To List Thorne's Hairstreak Butterfly as threatened or Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 17062–17070.
4/6/2010	12-month Finding on a Petition To List the Mountain Whitefish in the Big Lost River, Idaho, as Endangered or Threatened.	Notice of 12-month petition finding, Not warranted.	75 FR 17352–17363.
4/6/2010	90-Day Finding on a Petition to List a Stonefly (*Isoperla jewetti*) and a Mayfly (*Fallceon eatoni*) as Threatened or Endangered with Critical Habitat.	Notice of 90-day Petition Finding, Not substantial.	75 FR 17363–17367.
4/7/2010	12-Month Finding on a Petition to Reclassify the Delta Smelt From Threatened to Endangered Throughout Its Range.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 17667–17680.
4/13/2010	Determination of Endangered Status for 48 Species on Kauai and Designation of Critical Habitat.	Final Listing Endangered	75 FR 18959–19165.
4/15/2010	Initiation of Status Review of the North American Wolverine in the Contiguous United States.	Notice of Initiation of Status Review for Listing Decision.	75 FR 19591–19592.
4/15/2010	12-Month Finding on a Petition to List the Wyoming Pocket Gopher as Endangered or Threatened with Critical Habitat.	Notice of 12-month petition finding, Not warranted.	75 FR 19592–19607.
4/16/2010	90-Day Finding on a Petition to List a Distinct Population Segment of the Fisher in Its United States Northern Rocky Mountain Range as Endangered or Threatened with Critical Habitat.	Notice of 90-day Petition Finding, Substantial.	75 FR 19925–19935.
4/20/2010	Initiation of Status Review for Sacramento splittail (*Pogonichthys macrolepidotus*).	Notice of Initiation of Status Review for Listing Decision.	75 FR 20547–20548.
4/26/2010	90-Day Finding on a Petition to List the Harlequin Butterfly as Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 21568–21571.
4/27/2010	12-Month Finding on a Petition to List Susan's Purse-making Caddisfly (*Ochrotrichia susanae*) as Threatened or Endangered.	Notice of 12-month petition finding, Not warranted.	75 FR 22012–22025.
4/27/2010	90-day Finding on a Petition to List the Mohave Ground Squirrel as Endangered with Critical Habitat.	Notice of 90-day Petition Finding, Substantial.	75 FR 22063–22070.
5/4/2010	90-Day Finding on a Petition to List Hermes Copper Butterfly as Threatened or Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 23654–23663.
6/1/2010	90-Day Finding on a Petition To List *Castanea pumila* var. *ozarkensis*.	Notice of 90-day Petition Finding, Substantial.	75 FR 30313–30318.

FY 2010 COMPLETED LISTING ACTIONS—Continued

Publication date	Title	Actions	FR pages
6/1/2010	12-month Finding on a Petition to List the White-tailed Prairie Dog as Endangered or Threatened.	Notice of 12-month petition finding, Not warranted.	75 FR 30338–30363.
6/9/2010	90-Day Finding on a Petition To List van Rossem's Gull-billed Tern as Endangered or Threatened.	Notice of 90-day Petition Finding, Substantial.	75 FR 32728–32734.
6/16/2010	90-Day Finding on Five Petitions to List Seven Species of Hawaiian Yellow-faced Bees as Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 34077–34088.
6/22/2010	12-Month Finding on a Petition to List the Least Chub as Threatened or Endangered.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 35398–35424.
6/23/2010	90-Day Finding on a Petition to List the Honduran Emerald Hummingbird as Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 35746–35751.
6/23/2010	Listing *Ipomopsis polyantha* (Pagosa Skyrocket) as Endangered Throughout Its Range, and Listing *Penstemon debilis* (Parachute Beardtongue) and *Phacelia submutica* (DeBeque Phacelia) as Threatened Throughout Their Range.	Proposed Listing Endangered ..... Proposed Listing Threatened	75 FR 35721–35746.
6/24/2010	Listing the Flying Earwig Hawaiian Damselfly and Pacific Hawaiian Damselfly As Endangered Throughout Their Ranges.	Final Listing Endangered	75 FR 35990–36012.
6/24/2010	Listing the Cumberland Darter, Rush Darter, Yellowcheek Darter, Chucky Madtom, and Laurel Dace as Endangered Throughout Their Ranges.	Proposed Listing Endangered	75 FR 36035–36057.
6/29/2010	Listing the Mountain Plover as Threatened	Reinstatement of Proposed Listing Threatened.	75 FR 37353–37358.
7/20/2010	90-Day Finding on a Petition to List *Pinus albicaulis* (Whitebark Pine) as Endangered or Threatened with Critical Habitat.	Notice of 90-day Petition Finding, Substantial.	75 FR 42033–42040.
7/20/2010	12-Month Finding on a Petition to List the Amargosa Toad as Threatened or Endangered.	Notice of 12-month petition finding, Not warranted.	75 FR 42040–42054.
7/20/2010	90-Day Finding on a Petition to List the Giant Palouse Earthworm (*Driloleirus americanus*) as Threatened or Endangered.	Notice of 90-day Petition Finding, Substantial.	75 FR 42059–42066.
7/27/2010	Determination on Listing the Black-Breasted Puffleg as Endangered Throughout its Range; Final Rule.	Final Listing Endangered	75 FR 43844–43853.
7/27/2010	Final Rule to List the Medium Tree-Finch (*Camarhynchus pauper*) as Endangered Throughout Its Range.	Final Listing Endangered	75 FR 43853–43864.
8/3/2010	Determination of Threatened Status for Five Penguin Species.	Final Listing Threatened	75 FR 45497–45527.
8/4/2010	90-Day Finding on a Petition To List the Mexican Gray Wolf as an Endangered Subspecies With Critical Habitat.	Notice of 90-day Petition Finding, Substantial.	75 FR 46894–46898.
8/10/2010	90-Day Finding on a Petition to List *Arctostaphylos franciscana* as Endangered with Critical Habitat.	Notice of 90-day Petition Finding, Substantial.	75 FR 48294–48298.
8/17/2010	Listing Three Foreign Bird Species from Latin America and the Caribbean as Endangered Throughout Their Range.	Final Listing Endangered	75 FR 50813–50842.
8/17/2010	90-Day Finding on a Petition to List Brian Head Mountainsnail as Endangered or Threatened with Critical Habitat.	Notice of 90-day Petition Finding, Not substantial.	75 FR 50739–50742.
8/24/2010	90-Day Finding on a Petition to List the Oklahoma Grass Pink Orchid as Endangered or Threatened.	Notice of 90-day Petition Finding, Substantial.	75 FR 51969–51974.
9/1/2010	12-Month Finding on a Petition to List the White-Sided Jackrabbit as Threatened or Endangered.	Notice of 12-month petition finding, Not warranted.	75 FR 53615–53629.
9/8/2010	Proposed Rule To List the Ozark Hellbender Salamander as Endangered.	Proposed Listing Endangered	75 FR 54561–54579.
9/8/2010	Revised 12-Month Finding to List the Upper Missouri River Distinct Population Segment of Arctic Grayling as Endangered or Threatened.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 54707–54753.
9/9/2010	12-Month Finding on a Petition to List the Jemez Mountains Salamander (*Plethodon neomexicanus)* as Endangered or Threatened with Critical Habitat.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 54822–54845.
9/15/2010	12-Month Finding on a Petition to List Sprague's Pipit as Endangered or Threatened Throughout Its Range.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 56028–56050.
9/22/2010	12-Month Finding on a Petition to List *Agave eggersiana* (no common name) as Endangered.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 57720–57734.
9/28/2010	Determination of Endangered Status for the African Penguin.	Final Listing Endangered	75 FR 59645–59656.
9/28/2010	Determination for the Gunnison Sage-grouse as a Threatened or Endangered Species.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 59803–59863.

FY 2010 COMPLETED LISTING ACTIONS—Continued

Publication date	Title	Actions	FR pages
9/30/2010	12-Month Finding on a Petition to List the Pygmy Rabbit as Endangered or Threatened.	Notice of 12-month petition finding, Not warranted.	75 FR 60515–60561.

Our expeditious progress also included work on listing actions that we funded in FY 2010 but have not yet been completed to date. These actions are listed below. Actions in the top section of the table are being conducted under a deadline set by a court. Actions in the middle section of the table are being conducted to meet statutory timelines, that is, timelines required under the Act. Actions in the bottom section of the table are high-priority listing actions. These actions include work primarily on species with an LPN of 2, and, as discussed above, selection of these species is partially based on available staff resources, and when appropriate, include species with a lower priority if they overlap geographically or have the same threats as the species with the high priority. Including these species together in the same proposed rule results in considerable savings in time and funding, compared to preparing separate proposed rules for each of them in the future.

ACTIONS FUNDED IN FY 2010 BUT NOT YET COMPLETED

Species	Action
Actions Subject to Court Order/Settlement Agreement	
6 Birds from Eurasia	Final listing determination.
Flat-tailed horned lizard	Final listing determination.
Mountain plover [3]	Final listing determination.
6 Birds from Peru	Proposed listing determination.
Sacramento splittail	12-month petition finding.
Pacific walrus	12-month petition finding.
Wolverine	12-month petition finding.
Solanum conocarpum	12-month petition finding.
Desert tortoise—Sonoran population	12-month petition finding.
Thorne's Hairstreak butterfly [3]	12-month petition finding.
Hermes copper butterfly [3]	12-month petition finding.
Actions with Statutory Deadlines	
Casey's june beetle	Final listing determination.
Georgia pigtoe, interrupted rocksnail, and rough hornsnail	Final listing determination.
7 Bird species from Brazil	Final listing determination.
Southern rockhopper penguin—Campbell Plateau population	Final listing determination.
5 Bird species from Colombia and Ecuador	Final listing determination.
Queen Charlotte goshawk	Final listing determination.
5 species southeast fish (Cumberland darter, rush darter, yellowcheek darter, chucky madtom, and laurel dace).	Final listing determination.
Salmon crested cockatoo	Proposed listing determination.
CA golden trout	12-month petition finding.
Black-footed albatross	12-month petition finding.
Mount Charleston blue butterfly	12-month petition finding.
Mojave fringe-toed lizard [1]	12-month petition finding.
Kokanee—Lake Sammamish population [1]	12-month petition finding.
Cactus ferruginous pygmy-owl [1]	12-month petition finding.
Northern leopard frog	12-month petition finding.
Tehachapi slender salamander	12-month petition finding.
Coqui Llanero	12-month petition finding.
Dusky tree vole	12-month petition finding.
3 MT invertebrates (mist forestfly (*Lednia tumana*), *Oreohelix* sp. 3, *Oreohelix* sp. 31) from 206 species petition.	12-month petition finding.
5 UT plants (*Astragalus hamiltonii, Eriogonum soredium, Lepidium ostleri, Penstemon flowersii, Trifolium friscanum*) from 206 species petition.	12-month petition finding.
2 CO plants (*Astragalus microcymbus, Astragalus schmolliae*) from 206 species petition	12-month petition finding.
5 WY plants (*Abronia ammophila, Agrostis rossiae, Astragalus proimanthus, Boechere* (*Arabis*) *pusilla, Penstemon gibbensii*) from 206 species petition.	12-month petition finding.
Leatherside chub (from 206 species petition)	12-month petition finding.
Frigid ambersnail (from 206 species petition)	12-month petition finding.
Gopher tortoise—eastern population	12-month petition finding.
Wrights marsh thistle	12-month petition finding.
67 of 475 southwest species	12-month petition finding.
Grand Canyon scorpion (from 475 species petition)	12-month petition finding.
Anacroneuria wipukupa (a stonefly from 475 species petition)	12-month petition finding.
Rattlesnake-master borer moth (from 475 species petition)	12-month petition finding.
3 Texas moths (*Ursia furtiva, Sphingicampa blanchardi, Agapema galbina*) (from 475 species petition).	12-month petition finding.
2 Texas shiners (*Cyprinella* sp., *Cyprinella lepida*) (from 475 species petition)	12-month petition finding.
3 South Arizona plants (*Erigeron piscaticus, Astragalus hypoxylus, Amoreuxia gonzalezii*) (from 475 species petition).	12-month petition finding.

ACTIONS FUNDED IN FY 2010 BUT NOT YET COMPLETED—Continued

Species	Action
5 Central Texas mussel species (3 from 475 species petition)	12-month petition finding.
14 parrots (foreign species)	12-month petition finding.
Berry Cave salamander [1]	12-month petition finding.
Striped Newt [1]	12-month petition finding.
Fisher—Northern Rocky Mountain Range [1]	12-month petition finding.
Mohave Ground Squirrel [1]	12-month petition finding.
Puerto Rico Harlequin Butterfly	12-month petition finding.
Western gull-billed tern	12-month petition finding.
Ozark chinquapin (*Castanea pumila* var. ozarkensis)	12-month petition finding.
HI yellow-faced bees	12-month petition finding.
Giant Palouse earthworm	12-month petition finding.
Whitebark pine	12-month petition finding.
OK grass pink (*Calopogon oklahomensis*) [1]	12-month petition finding.
Southeastern pop snowy plover & wintering pop. of piping plover [1]	90-day petition finding.
Eagle Lake trout [1]	90-day petition finding.
Smooth-billed ani [1]	90-day petition finding.
Bay Springs salamander [1]	90-day petition finding.
32 species of snails and slugs [1]	90-day petition finding.
42 snail species (Nevada & Utah)	90-day petition finding.
Red knot *roselaari* subspecies	90-day petition finding.
Peary caribou	90-day petition finding.
Plains bison	90-day petition finding.
Spring Mountains checkerspot butterfly	90-day petition finding.
Spring pygmy sunfish	90-day petition finding.
Bay skipper	90-day petition finding.
Unsilvered fritillary	90-day petition finding.
Texas kangaroo rat	90-day petition finding.
Spot-tailed earless lizard	90-day petition finding.
Eastern small-footed bat	90-day petition finding.
Northern long-eared bat	90-day petition finding.
Prairie chub	90-day petition finding.
10 species of Great Basin butterfly	90-day petition finding.
6 sand dune (scarab) beetles	90-day petition finding.
Golden-winged warbler	90-day petition finding.
Sand-verbena moth	90-day petition finding.
404 Southeast species	90-day petition finding.
High-Priority Listing Actions [3]	
19 Oahu candidate species [2] (16 plants, 3 damselflies) (15 with LPN = 2, 3 with LPN = 3, 1 with LPN =9).	Proposed listing.
19 Maui-Nui candidate species [2] (16 plants, 3 tree snails) (14 with LPN = 2, 2 with LPN = 3, 3 with LPN = 8).	Proposed listing.
Dune sagebrush lizard (formerly Sand dune lizard) [3] (LPN = 2)	Proposed listing.
2 Arizona springsnails [2] (*Pyrgulopsis bernadina* (LPN = 2), *Pyrgulopsis trivialis* (LPN = 2))	Proposed listing.
New Mexico springsnail [2] (*Pyrgulopsis chupaderae* (LPN = 2))	Proposed listing.
2 mussels [2] (rayed bean (LPN = 2), snuffbox No LPN)	Proposed listing.
2 mussels [2] (sheepnose (LPN = 2), spectaclecase (LPN = 4)).	Proposed listing.
Altamaha spinymussel [2] (LPN = 2)	Proposed listing.
8 southeast mussels (southern kidneyshell (LPN = 2), round ebonyshell (LPN = 2), Alabama pearlshell (LPN = 2), southern sandshell (LPN = 5), fuzzy pigtoe (LPN = 5), Choctaw bean (LPN = 5), narrow pigtoe (LPN = 5), and tapered pigtoe (LPN = 11)).	Proposed listing.

[1] Funds for listing actions for these species were provided in previous FYs.
[2] Although funds for these high-priority listing actions were provided in FY 2008 or 2009, due to the complexity of these actions and competing priorities, these actions are still being developed.
[3] Partially funded with FY 2010 funds; also will be funded with FY 2011 funds.

We also funded work on resubmitted petitions findings for 162 candidate species (species petitioned prior to the last CNOR). We did not include new information in our resubmitted petition finding for the Columbia Basin population of the greater sage-grouse in this notice, as the significance of the Columbia Basin DPS to the greater sage-grouse will require further review and we will update our finding at a later date (*see* 75 FR 13909; March 23, 2010). We also did not include new information in our resubmitted petition findings for the 43 candidate species for which we are preparing proposed listing determinations; *see* summaries below regarding publication of these determinations (these species will remain on the candidate list until a proposed listing rule is published). We also funded a revised 12-month petition finding for the candidate species that we are removing from candidate status, which is being published as part of this CNOR (*see Candidate Removals*). Because the majority of these 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. We also 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 2010, we also funded work on resubmitted petition findings for uplisting six listed species, for which petitions were previously received.

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 Act, the actions described above collectively constitute expeditious progress.

Although we have not been able to resolve the listing status of many of the candidates, several programs in the Service contribute to the conservation of these species. 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 140 species covering 5 million acres of habitat. In some instances, the sustained implementation of strategically designed conservation efforts culminates in making listing unnecessary for species that are candidates for listing or for which listing has been proposed.

Findings for Petitioned Candidate Species

Below are updated summaries for petitioned candidates for which we published findings, pursuant to section 4(b)(3)(B). We are making continued warranted-but-precluded 12-month findings on the petitions for these species (for our revised 12-month petition findings for species we are removing from candidate status, *see* summaries above under "**Candidate Removals**").

Mammals

Florida bonneted bat (*Eumops floridanus*)—The following summary is based on information in our files. No new information was presented in the petition received on January 29, 2010. Endemic to south Florida, this species has been found at 12 locations, 5 on private land and 7 on public land. The entire population may number less than a few hundred individuals. Results from a rangewide acoustical survey found a small number of locations where calls were recorded, and low numbers of calls were recorded at each location. Few active roost sites are known; all are artificial (*i.e.,* bat houses). Prolonged cold temperatures in January and February 2010 affected one active roost; it is not clear what effect the prolonged cold had on the species. Efforts are under way to confirm presence at all previously documented sites.

Occurrences are threatened by loss and conversion of habitat to other uses and habitat alteration (*e.g.,* removal of old trees with cavities, removal of manmade structures with suitable roosting sites); this threat is expected to continue and increase. Although occurrences on conservation lands are inherently more protected than those on private lands, habitat alteration during management practices may affect natural roosting sites even on conservation lands if Florida bonneted bats are present but undetected. Therefore, occupied and potential habitat on forested or wooded lands, both private and public, continues to be at risk. The species is vulnerable to a wide array of natural and human factors: Low population size, restricted range, low fecundity, large distances between occupied locations, and small number of occupied locations. Such factors may make recolonization unlikely if any site is extirpated and may make the species vulnerable to extinction due to genetic drift, inbreeding depression, extreme weather events, and random or chance changes to the environment. Where the species occurs in or near human dwellings or structures, it is at risk to persecution, removal, and disturbance. Disturbance from humans, either intentional or inadvertent, can occur at any of the occurrences of this bat on either private or conservation lands. Disturbance of maternity roosts is of particular concern due to this species' low fecundity and small population. Pesticide applications may be affecting its foraging base, especially in coastal areas.

Due to its overall vulnerability, intense hurricanes are a significant threat; this threat is expected to continue or increase in the future. Intense storms can cause mortality during the storm, exposure to predation immediately following the storm, loss of roost sites, impacts on foraging areas and insect abundance, and disruption of the maternal period. Prolonged periods of cold temperatures may have severe impacts on the population and increase risks from other threats by weakening individuals, extirpating colonies, or further reducing colony sizes. Although disease is a significant threat for other bat species, it is not known to be a threat for the Florida bonneted bat at this time. The protection currently afforded the Florida bonneted bat is limited, provides little protection to the species' occupied habitat, and includes no provisions to protect suitable but unoccupied habitat within the vicinity of known colony sites. Overall, we find the magnitude of threats is high due to the severity of the threats on this species. We find that most of the threats are currently occurring and, consequently, overall, threats are imminent. Therefore, we assigned an LPN of 2 to this species.

Pacific Sheath-tailed Bat, American Samoa DPS (*Emballonura semicaudata semicaudata*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This small bat is a member of the Emballonuridae, an Old World bat family that has an extensive distribution, primarily in the tropics. The Pacific sheath-tailed bat was once common and widespread in Polynesia and Micronesia and it is the only insectivorous bat recorded from a large part of this area. The species as a whole (*E. semicaudata*) occurred on several of the Caroline Islands (Palau, Chuuk, and Pohnpei), Samoa (Independent and American), the Mariana Islands (Guam and the CNMI), Tonga, Fiji, and Vanuatu. While populations appear to be healthy in some locations, mainly in the Caroline Islands, they have declined substantially in other areas, including Independent and American Samoa, the Mariana Islands, Fiji, and possibly Tonga. Scientists recognize four subspecies: *E. s. rotensis,* endemic to the Mariana Islands (Guam and the Commonwealth of the Northern Mariana Islands (CNMI)); *E. s. sulcata,* occurring in Chuuk and Pohnpei; *E. s. palauensis,* found in Palau; and *E. s. semicaudata,* occurring in American and Independent Samoa, Tonga, Fiji, and Vanuatu. The candidate assessment form addresses the distinct population segment (DPS) of *E. s. semicaudata* that occurs in American Samoa.

E. s. semicaudata historically occurred in American and Independent Samoa, Tonga, Fiji, and Vanuatu. It is extant in Fiji and Tonga, but may be extirpated from Vanuatu and Independent Samoa. There is some

concern that it is also extirpated from American Samoa, the location of this DPS, where surveys are currently ongoing to ascertain its status. The factors that led to the decline of this subspecies and the DPS are poorly understood; however, current threats to this subspecies and the DPS include habitat loss, predation by introduced species, and its small population size and distribution, which make the taxon extremely vulnerable to extinction due to typhoons and similar natural catastrophes. Thus, the threats are high in magnitude. The Pacific sheath-tailed bat may also by susceptible to disturbance to roosting caves. The LPN for *E. s. semicaudata* is 3 because the magnitude of the threats is high, the threats are ongoing, and therefore, imminent, and the taxon is a distinct population segment of a subspecies.

Pacific Sheath-tailed Bat (*Emballonura semicaudata rotensis*), Guam and the Commonwealth of the Northern Mariana Islands—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This small bat is a member of the Emballonuridae, an Old World bat family that has an extensive distribution, primarily in the tropics. The Pacific sheath-tailed bat was once common and widespread in Polynesia and Micronesia and it is the only insectivorous bat recorded from a large part of this area. *E. s. rotensis* is historically known from the Mariana Islands and formerly occurred on Guam and in the CNMI on Rota, Aguiguan, Tinian (known from prehistoric records only), Saipan, and possibly Anatahan and Maug. Currently, *E. s. rotensis* appears to be extirpated from all but one island in the Mariana archipelago. The single remaining population of this subspecies occurs on Aguiguan, CNMI.

Threats to this subspecies have not changed over the past year. The primary threats to the subspecies are ongoing habitat loss and degradation as a result of feral goat (*Capra hircus*) activity on the island of Aguiguan and the taxon's small population size and limited distribution. Predation by nonnative species and human disturbance are also potential threats to the subspecies. The subspecies is believed near the point where stochastic events, such as typhoons, are increasingly likely to affect its continued survival. The disappearance of the remaining population on Aguiguan would result in the extinction of the subspecies. Thus, the threats are high in magnitude. The LPN for *E. s. rotensis* remains at 3 because the magnitude of the threats is high, the threats are ongoing, and therefore, imminent, and the taxon is a subspecies.

New England cottontail (*Sylvilagus transitionalis*)—The following summary is based on information contained in our files and information received in response to our notice published on June 30, 2004, when we announced our 90-day petition finding and initiation of a status review (69 FR 39395). We received the petition on August 30, 2000. The New England cottontail (NEC) is a medium-to-large sized cottontail rabbit that may reach 1,000 grams in weight, and is one of two species within the genus *Sylvilagus* occurring in New England. New England cottontails are considered habitat specialists, in so far as they are dependent upon early-successional habitats typically described as thickets. The species is the only endemic cottontail in New England. Historically, the NEC occurred in seven States and ranged from southeastern New York (east of the Hudson River) north through the Champlain Valley, southern Vermont, the southern half of New Hampshire, southern Maine, and south throughout Massachusetts, Connecticut and Rhode Island. The current range of the NEC has declined substantially and occurrences have become increasingly separated. The species' distribution is fragmented into five apparently isolated metapopulations. The area occupied by the cottontail has contracted from approximately 90,000 sq km to 12,180 sq km. Recent surveys indicate that the longterm decline in NEC continues. For example, surveys for the species in early 2008 documented the presence of NEC in 7 of the 23 New Hampshire locations that were known to be occupied in 2002 and 2003. Similarly, surveys in Maine found the species present in 12 of 57 sites identified in an extensive survey that spanned the years 2000 to 2004. Unlike the New Hampshire study, several new sites were documented in Maine during 2008. Some have suggested that the decline in NEC occurrences in 2008 may be attributed to persistent snow cover throughout northern New England during the winter of 2007–2008. Similar surveys were conducted during the winter of 2009 in Maine, New Hampshire, Rhode Island, and New York. The results are pending further analysis. It is estimated that less than one-third of the occupied sites occur on lands in conservation status and fewer than 10 percent are being managed for early-successional forest species.

The primary threat to the New England cottontail is loss of habitat through succession and alteration. Isolation of occupied patches by areas of unsuitable habitat and high predation rates are resulting in local extirpation of New England cottontails from small patches. The range of the New England cottontail has contracted by 75 percent or more since 1960 and current land uses in the region indicate that the rate of change, about 2 percent range loss per year, will continue. Additional threats include competition for food and habitat with introduced eastern cottontails and large numbers of native white-tailed deer; inadequate regulatory mechanisms to protect habitat; and mortality from predation. The magnitude of the threats continues to be high, because they occur rangewide, and have a severe negative effect on the survival of the species. They are imminent because they are ongoing. Thus, we retained an LPN of 2 for this species. Conservation measures that address the threats to the species are being developed.

Fisher, West Coast DPS (*Martes pennanti*)—The following summary is based on information contained in our files and in the Service's initial warranted-but-precluded finding published in the **Federal Register** on April 8, 2004 (68 FR 18770). The fisher is a carnivore in the family Mustelidae and is the largest member of the genus Martes. Historically, the West Coast population of the fisher extended south from British Columbia into western Washington and Oregon, and in the North Coast Ranges, Klamath-Siskiyou Mountains, and Sierra Nevada in California. Because of a lack of detections with standardized survey efforts over much of the fisher's historical range, the fisher is believed to be extirpated or reduced to scattered individuals from the lower mainland of British Columbia through Washington and northern Oregon and in the central and northern Sierra Nevada in California. Native extant populations of fisher are isolated to the North Coast of California, the Klamath-Siskiyou Mountains of northern California and southern Oregon, and the southern Sierra Nevada in California. Descendents of a fisher reintroduction effort also occur in the southern Cascades in Oregon. The Washington Department of Fish and Wildlife in conjunction with the Olympic National Park has completed the third year of a reintroduction effort as the State's first step in implementing their recover goals for fisher. The California Department of Fish and Game and other collaborators began the first year of their translocation efforts into the northern Sierra Nevada during the winter of 2009–2010.

Estimates of fisher numbers in native populations of the West Coast DPS vary

widely. A rigorous monitoring program is lacking for the northern California southern Oregon and southern Oregon Cascades populations, making estimates of fisher numbers for these two populations difficult. The fisher monitoring program in the southern Sierra Nevada population has provided preliminary estimates indicating no decline in the index of abundance within the monitored portion of the population. There is a high degree of genetic relatedness within some populations. The two populations of native fisher in the northern California southern Oregon and southern Sierra Nevada are separated by four times the species' maximum dispersal distance. The extant fisher populations are either small (southern Sierra Nevada and southern Oregon Cascades) and are isolated from one another or both.

Major threats that fragment or remove key elements of fisher habitat include various forest vegetation management practices such as timber harvest and fuels-reduction treatments. Other potential major threats in portions of the range include: Large stand-replacing wildfires, changes in forest composition and structure related to climate change effects, forest and fuels management, and urban and rural development. Threats to fishers that lead to direct mortality and injury include: Collisions with vehicles; predation; and viral borne diseases such as rabies, parvovirus, and canine distemper. Existing regulatory mechanisms on Federal, State, and private lands do not provide sufficient protection for the key elements of fisher habitat, or the certainty that conservation efforts will be effective or implemented. The magnitude of threats is high as they occur across the range of the DPS resulting in a negative impact on fisher distribution and abundance. However, the threats are nonimminent as the greatest long-term risks to the fisher in its west coast range are the subsequent ramifications of the isolation of small populations and their interactions with the listed threats. The three remaining areas containing fisher populations appear to be stable or not rapidly declining based on recent survey and monitoring efforts. Therefore, we assigned an LPN of 6 to this DPS.

New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)—The following summary is based on information contained in our files and the petition we received October 15, 2008. The New Mexico meadow jumping mouse (jumping mouse) is endemic to New Mexico, Arizona, and a small area of southern Colorado. The jumping mouse nests in dry soils but uses moist, streamside, dense riparian/wetland vegetation. Recent genetic studies confirm that the New Mexico meadow jumping mouse is a distinct subspecies from other *Zapus hudsonius* subspecies, confirming the currently accepted subspecies designation.

The threats that have been identified are excessive grazing pressure, water use and management, highway reconstruction, development, recreation, and beaver removal.

Since the early to mid-1990s over 100 historical localities have been surveyed. Currently only 24 are extant, 11 in New Mexico (including one that is contiguous with the Colorado locality) and 13 in Arizona. Moreover, the highly fragmented nature of its distribution is also a major contributor to the vulnerability of this species and increases the likelihood of very small, isolated populations being extirpated. The insufficient number of secure populations, and the destruction, modification, or curtailment of its habitat, continue to pose the most immediate threats to this species. Because the threats affect the jumping mouse in all but two of the extant localities, the threats are of a high magnitude. These threats are currently occurring and, therefore, are imminent. Thus, we continue to assign an LPN of 3 to this subspecies.

Mazama pocket gopher (*Thomomys mazama* ssp. *couchi, douglasii, glacialis, louiei, melanops, pugetensis, tacomensis, tumuli, yelmensis*)—The following summary is based on information contained in our files. No new information was provided in the petition received December 11, 2002. Seven of the nine subspecies of pocket gopher are associated with glacial outwash prairies in western Washington (*T. m. melanops* is found on alpine meadows in Olympic National Park, and *T. m. oregonus* is found in extreme southwest Washington). Of these seven subspecies, five are likely still extant (*couchi, glacialis, pugetensis, tumuli,* and *yelmensis*). Few of these glacial outwash prairies remain in Washington today. Historically, such prairies were patchily distributed, but the area they occupied totaled approximately 170,000 acres (Stinson 2005). Now, residential and commercial development and in-growth of woody and/or nonnative vegetation have further reduced their numbers. In addition, development in or adjacent to these prairies has likely increased predation on Mazama pocket gophers by dogs and cats.

The magnitude of threat is high due to populations with patchy and isolated distributions in habitats highly desirable for development and subject to a wide variety of human activities that permanently alter the habitat. The threat of invasive plant species to the quality of a highly specific habitat requirement is high and constant. There are few known populations of each subspecies. A limited dispersal capability, and the loss and degradation of additional patches of appropriate habitat will further isolate populations and increase their vulnerability to extinction. Loss of any of the subspecies will reduce the genetic diversity and the likelihood of continued existence of the *T. mazama* subspecies complex in Washington.

The threats are imminent. Two of the subspecies (Cathlamet and Tacoma) are likely extinct. The status of *T. m. douglasii* is unknown, but its location in a matrix of towns means it's threatened by encroaching development. Two gravel pits are operating on part of the remaining Roy Prairie pocket gopher habitat, and another one occurs in the area of the Tenino pocket gopher. The largest populations of two other subspecies (Shelton and Olympia) are located on airports with planned development. Yelm pocket gophers are also threatened by proposed development. Due to its low genetic diversity, isolation, and potential for natural habitat alterations in the future, *T. m. melanops* (Olympic pocket gopher) is susceptible to stochastic events and small population effects such as genetic drift and founder effects. Thus, we assign an LPN of 3 to these subspecies.

Gunnison's prairie dog (*Cynomys gunnisoni*)—This species occurs in Arizona, Colorado, New Mexico, and Utah. However, only the significant portion of the range in the montane portions of central and south central Colorado and north central New Mexico is included on our list of candidates. Within this portion of the range, plague has significantly reduced the number and size of populations, resulting in considerable effects to the species. Populations within montane habitat have distinct disadvantages in resisting the effects of plague due to a high abundance of fleas that spread plague, small populations that cannot recover in numbers from plague epizootics, and isolated populations that limit the ability to recolonize. Poisoning and shooting continue to be threats to the Gunnison's prairie dog within the montane portion of its range and contribute to the decline of the species when combined with the effects of disease. Agriculture, urbanization, roads, and oil and gas development each currently affect a small percentage of Gunnison's prairie dog habitat. Plague is significantly affecting the remaining

small, isolated populations. Plague epizootics can extirpate populations there within a short timeframe (3 to 10 years). We have assigned an LPN of 3 to this species due to imminent threats of a high magnitude in a significant portion of its range.

Southern Idaho ground squirrel (*Spermophilus brunneus endemicus*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The southern Idaho ground squirrel is endemic to four counties in southwest Idaho; its total known range is approximately 425,630 hectares (1,051,752 acres). Threats to southern Idaho ground squirrels include: Habitat degradation and fragmentation; direct killing from shooting, trapping, or poisoning; predation; competition with Columbian ground squirrels; and inadequacy of existing regulatory mechanisms. Habitat degradation and fragmentation appear to be the primary threats to the species. Nonnative annuals now dominate much of this species' range, have changed the species composition of vegetation used as forage for the southern Idaho ground squirrel, and have altered the fire regime by accelerating the frequency of wildfire. Habitat deterioration, destruction, and fragmentation contribute to the current patchy distribution of southern Idaho ground squirrels. Based on recent genetic work, southern Idaho ground squirrels are subject to more genetic drift and inbreeding than expected.

Two Candidate Conservation Agreements with Assurances (CCAAs) have been completed for this species in recent years. Both CCAAs include conservation measures that provide additional protection to southern Idaho ground squirrels from recreational shooting and other direct killing on enrolled lands, and also allow the State of Idaho, the Service, and BLM to investigate ways of restoring currently degraded habitat. At this time, the acreage enrolled through these two CCAAs is 38,756 ha (95,767 ac), or 9 percent of the known range approximately. While the ongoing conservation efforts have helped to reduce the magnitude of threats to moderate, habitat degradation remains the primary threat to the species throughout most of its range. This threat is imminent due to the ongoing and increasing prevalence and dominance of nonnative vegetation, and the current patchy distribution of the species. Thus, we assign an LPN of 9 to this subspecies.

Washington ground squirrel (*Spermophilus washingtoni*)—The following summary is based on information contained in our files and in the petition we received on March 2, 2000. The Washington ground squirrel is endemic to the Deschutes–Columbia Plateau sagebrush-steppe and grassland communities in eastern Oregon and south-central Washington. Although widely abundant historically, recent surveys suggest that its current range has contracted toward the center of its historical range. Approximately two-thirds of the Washington ground squirrel's total historical range has been converted to agricultural and residential uses. The most contiguous, least-disturbed expanse of suitable habitat within the species' range occurs on a site owned by Boeing, Inc. and on the Naval Weapons Systems Training Facility near Boardman, Oregon. In Washington, the largest expanse of known suitable habitat occurs on State and Federal lands.

Agricultural, residential, and windpower development, among other forms of development, continue to eliminate Washington ground squirrel habitat in portions of its range. Throughout much of its range, Washington ground squirrels are threatened by the establishment and spread of invasive plant species, particularly cheatgrass, which alter available cover and food quantity and quality, and increase fire intervals. Additional threats include habitat fragmentation, recreational shooting, genetic isolation and drift, and predation. Potential threats include disease, drought, and possible competition with related species in disturbed habitat at the periphery of their range. In Oregon, some threats are being addressed as a result of the State listing of this species, and by implementation of the Threemile Canyon Farms Multi-Species Candidate Conservation Agreement with Assurances (CCAA). In Washington, there are currently no formal agreements with private landowners or with State or Federal agencies to protect the Washington ground squirrel. Additionally, no State or Federal management plans have been developed that specifically address the needs of the species or its habitat. Since current and potential threats are widespread and, in some cases, severe, we conclude the magnitude of threats remains high. The Washington ground squirrel has both imminent and nonimminent threats. At a range-wide scale, we conclude the threats are nonimminent based largely on the following: The CCAA addressed the imminent loss of a large portion of habitat to agriculture, there are no other large-scale efforts to convert suitable habitat to agriculture, and windpower project impacts can be minimized through compliance with the Oregon State Endangered Species Act (OESA) and/or the Columbia Basin Ecoregion wind energy siting and permitting guidelines. We also consider the potential development of shooting ranges on the Naval Weapons Systems Training Facility as nonimminent because the proposed action is still being developed, making us unable to assess its timing and impact, which could be minimized through compliance with the OESA. We, therefore, have retained an LPN of 5 for this species.

Birds

Spotless crake, American Samoa DPS (*Porzana tabuensis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Porzana tabuensis* is a small, dark, cryptic rail found in wetlands and rank scrub or forest in the Philippines, Australia, Fiji, Tonga, Society Islands, Marquesas, Independent Samoa, and American Samoa (Ofu, Tau). The genus *Porzana* is widespread in the Pacific, where it is represented by numerous island-endemic and flightless species (many of which are extinct as a result of anthropogenic disturbances) as well as several more cosmopolitan species, including *P. tabuensis*. No subspecies of *P. tabuensis* are recognized.

The American Samoa population is the only population of spotless crakes under U.S. jurisdiction. The available information indicates that distinct populations of the spotless crake, a species not noted for long-distance dispersal, are definable. The population of spotless crakes in American Samoa is discrete in relation to the remainder of the species as a whole, which is distributed in widely separated locations. Although the spotless crake (and other rails) have dispersed widely in the Pacific, island rails have tended to reduce or lose their power of flight over evolutionary time and so become isolated (and vulnerable to terrestrial predators such as rats). The population of this species in American Samoa is therefore distinct based on geographic and distributional isolation from spotless crake populations on other islands in the oceanic Pacific, the Philippines, and Australia. The American Samoa population of the spotless crake links the Central and Eastern Pacific portions of the species' range. The loss of this population would result in an increase of roughly 500

miles (805 kilometers) in the distance between the central and eastern Polynesian portions of the spotless crake's range, and could result in the isolation of the Marquesas and Society Islands populations by further limiting the potential for even rare genetic exchange. Based on the discreteness and significance of the American Samoa population of the spotless crake, we consider this population to be a distinct vertebrate population segment.

Threats to this population have not changed over the past year. The population in American Samoa is threatened by small population size, limited distribution, predation by nonnative mammals, continued development of wetland habitat, and natural catastrophes such as hurricanes. The co-occurrence of a known predator of ground-nesting birds, the Norway rat (*Rattus norvegicus*), along with the extremely restricted observed distribution and low numbers, indicate that the magnitude of the threats to the American Samoa DPS of the spotless crake continues to be high, because the threats significantly affect the species survival. The threats are ongoing, and therefore imminent. Based on this assessment of existing information about the imminence and high magnitude of these threats, we assigned the spotless crake an LPN of 3.

Yellow-billed cuckoo, western U.S. DPS (*Coccyzus americanus*)—The following summary is based on information contained in our files and the petition we received on February 9, 1998. See also our 12-month petition finding published on July 25, 2001 (66 FR 38611). The yellow-billed cuckoo is a medium-sized bird of about 12 inches (30 centimeters) in length with a slender, long-tailed profile and a fairly stout and slightly down-curved bill. Plumage is grayish-brown above and white below, with rufous primary flight feathers with the tail feathers boldly patterned with black and white below. Western cuckoos breed in large blocks of riparian habitats (particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). Dense understory foliage appears to be an important factor in nest-site selection, while cottonwood trees are an important foraging habitat in areas where the species has been studied in California. We consider the yellow-billed cuckoos that occur in the western United States as a distinct population segment (DPS). The area for this DPS is west of the crest of the Rocky Mountains.

The threats currently facing the yellow-billed cuckoo include habitat loss, over-grazing, and pesticide application. Principal causes of riparian habitat losses are conversion to agricultural and other uses, dams and river-flow management, stream channelization and stabilization, and livestock grazing. Available breeding habitats for cuckoos have also been substantially reduced in area and quality by groundwater pumping and the replacement of native riparian habitats by invasive nonnative plants, particularly tamarisk. Overuse by livestock has been a major factor in the degradation and modification of riparian habitats in the western United States. The effects include changes in plant community structure and species composition and in relative abundance of species and plant density. These changes are often linked to more widespread changes in watershed hydrology. Livestock grazing in riparian habitats typically results in reduction of plant species diversity and density, especially of palatable broadleaf plants like willows and cottonwood saplings, and is one of the most common causes of riparian degradation. In addition to destruction and degradation of riparian habitats, pesticides may affect cuckoo populations. In areas where riparian habitat borders agricultural lands— e.g., in California's Central Valley—pesticide use may indirectly affect cuckoos by reducing prey numbers, or by poisoning nestlings if sprayed directly in areas where the birds are nesting. A group comprised of Federal, State, and nongovernmental agencies organized by the Service (Region 8, Sacramento Fish and Wildlife Office) is in the process of completing a rangewide conservation assessment and strategy for the Western yellow-billed cuckoo. The assessment is in early stages of development, with work beginning on a conservation strategy expected in 2011. The LPN for the yellow-billed cuckoo remains a 3, with imminent threats of high magnitude.

Friendly ground-dove, American Samoa DPS (*Gallicolumba stairi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The genus *Gallicolumba* is distributed throughout the Pacific and Southeast Asia. The genus is represented in the oceanic Pacific by six species: Three are endemic to Micronesian islands or archipelagos, two are endemic to island groups in French Polynesia, and *G. stairi* is endemic to Samoa, Tonga, and Fiji. Some authors recognize two subspecies of the friendly ground-dove, one, slightly smaller, in the Samoan archipelago (*G. s. stairi*), and one in Tonga and Fiji (*G. s. vitiensis*), but because morphological differences between the two are minimal, we are not recognizing separate subspecies at this time.

In American Samoa, the friendly ground-dove has been found on the islands of Ofu and Olosega (Manua Group). Threats to this subspecies have not changed over the past year. Predation by nonnative species and natural catastrophes such as hurricanes are the primary threats to the subspecies. Of these, predation by nonnative species is thought to be occurring now and likely has been occurring for several decades. This predation may be an important impediment to increasing the population. Predation by introduced species has played a significant role in reducing, limiting, and extirpating populations of island birds, especially ground-nesters like the friendly ground-dove, in the Pacific and other locations worldwide. Nonnative predators known or thought to occur in the range of the friendly ground-dove in American Samoa are feral cats (*Felis catus*), Polynesian rats (*Rattus exulans*), black rats (*R. rattus*), and Norway rats (*R. norvegicus*).

In January 2004 and February of 2005, hurricanes virtually destroyed the habitat of *G. stairi* in the area on Olosega Island that the species had been most frequently recorded. Although this species has coexisted with severe storms for millennia, this example illustrates the potential for natural disturbance to exacerbate the effect of anthropogenic disturbance on small populations. Consistent monitoring using a variety of methods over the last 5 years yielded few observations and no change in the relative abundance of this taxon in American Samoa. The total population size is poorly known, but is unlikely to number more than a few hundred pairs. The distribution of the friendly ground-dove is limited to steep, forested slopes with an open understory and a substrate of fine scree or exposed earth; this habitat is not common in American Samoa. The threats are ongoing and, therefore, imminent and the magnitude is moderate because the relative abundance has remained the same for several years. Thus, we assign this subspecies an LPN of 9.

Streaked horned lark (*Eremophila alpestris strigata*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on December 11, 2002. The streaked horned lark occurs in Washington and Oregon, and is thought to be extirpated in British

Columbia, Canada. The streaked horned lark nests on bare ground in sparsely vegetated sites in short-grass dominated habitats, such as native prairies, coastal dunes, fallow and active agricultural fields, seasonal wetlands, moderately- to heavily-grazed pastures, seasonal mudflats, airports, and dredge-deposition sites in and along the tidal reach of the Columbia River. In Washington, surveys show that there are approximately 330 remaining breeding birds. In Oregon, the breeding population is estimated to be over 500 birds.

The streaked horned lark's breeding habitat continues to be threatened by loss and degradation due to conversion of native grasslands to other uses (such as agriculture, homes, recreational areas, and industry), encroachment of woody vegetation, invasion of nonnative plant species (*e.g.,* Scot's broom, sod-forming grasses, and beachgrasses), and dredging-related activities. Native prairies have been nearly eliminated throughout the range of the species. It is estimated that less than 1 to 3 percent of the native grassland and savanna remains. And those that remain have been invaded by nonnative sod-forming grasses. Coastal nesting areas have suffered the same fate. A recent purchase of prairie lands in Washington has secured habitat that would have been developed. Its status as suitable lark nesting habitat is unknown.

Wintering habitats are seemingly few, and are susceptible to unpredictable conversion to unsuitable over-wintering habitat, plant succession, and invasion by nonnative plants. Where larks inhabit manmade habitats similar in structure to native prairies (such as airports, military reservations, agricultural fields, and dredge-formed islands), or where they occur adjacent to human habitation, they are subjected to a variety of unintentional human disturbances. These include mowing, recreational and military activities, plowing, flooding, and dredge-material deposition during the nesting season, as well as intentional disturbances such as at the Joint Base Lewis–McChord Field where falcons and a dog are used to haze birds in order to avoid aircraft collisions, and the biennial (but opposite year) RODEO and Air Expo events that occur on or adjacent to lark nesting habitat. In some areas, landowners have taken steps to improve streaked horned lark nesting habitat.

The magnitude of threat is high due to small populations with low genetic diversity, rapidly declining populations, and patchy and isolated habitats in areas desirable for development, many of which remain unsecured. The threat of invasive plant species is high and constant, aside from a few restoration sites. The numbers of individuals are low and the numbers of populations are few. In addition, estimates of lambda using data from all Washington sites suggest a rapidly declining population. Over-wintering birds are concentrated in larger flocks and subject to unpredictable wintering habitat loss (especially in Oregon), potentially affecting a large portion of the population at one time. In Washington, known populations occur on airports, military bases, coastal beaches, and Columbia River islands, where management, training activities, recreation, and dredge-material deposition continue to negatively impact streaked horned lark breeding and wintering (although current work being conducted by TNC may ultimately lessen this last threat). In Oregon, breeding and wintering sites occur on Columbia River islands, in cultivated grass fields, grazed pastures, fallow fields, roadside shoulders, Christmas tree farms, seasonal wetlands, restored wet prairie, and wetland mudflats. Such areas continue to be subject to negative impacts such as dredge material deposition, development, plowing, mowing, pesticide and herbicide applications, trampling, vehicle traffic, and recreation.

The threats are imminent, as a result of continued loss of suitable lark habitat, high nest-predation rates, low adult survival, and low fecundity. Low adult survival and fecundity rates in the Puget lowlands are of particular concern. Loss of habitat is being caused by development on and adjacent to several of its nesting areas, including continued expansions of the Fort Lewis Gray Army Airfield West Ramp and the Olympia Airport. Wintering populations are at risk in Oregon due to the manner in which larks gather in large flocks that are vulnerable to stochastic events, and also due to the fact that their wintering habitat occurs on privately owned agricultural lands that are subject to unpredictable conversion. Other ongoing threats include those occurring on the Joint Base Lewis-McChord Field (hazing birds off the airfields, RODEO, and Air Expo). Based on imminent threats of a high magnitude, we continue to assign an LPN of 3 to this subspecies.

Red knot (*Calidris canutus rufa*)—The following summary is based on information contained in our files and information provided by petitioners. Four petitions to emergency list the red knot have been received: One on August 9, 2004, two others on August 5, 2005, and the most recent on February 27, 2008. The *rufa* subspecies is one of six recognized subspecies of red knot, and one of three subspecies occurring in North America. This subspecies makes one of the longest-distance migrations known in the animal kingdom, as it travels between breeding areas in the central Canadian Arctic and wintering areas that are primarily in southern South America along the coast of Chile and Argentina. They migrate along the Atlantic coast of the United States, where they may be found from Maine to Florida.

The Delaware Bay area (in Delaware and New Jersey) is the largest known spring migration stopover area, with far fewer migrants congregating elsewhere along the Atlantic coast. The concentration in the Delaware Bay area occurs from the middle of May to early June, corresponding to the spawning season of horseshoe crabs. The knots feed on horseshoe crab eggs, rebuilding energy reserves needed to complete migrations to the Arctic and arrive on the breeding grounds in good condition. In the past, horseshoe crab eggs at Delaware Bay were so numerous that a knot could dependably eat enough in two to three weeks to double its weight.

Surveys at wintering areas and at Delaware Bay during spring migration indicate a substantial decline in the red knot in recent years. At the Delaware Bay area, peak counts between 1982 and 1998 were as high as 95,360 individuals. Counts may vary considerably between years. Some of the fluctuations can be attributed to predator-prey cycles in the breeding grounds, and counts show that knots rebound from such reductions. Peak counts of red knots observed during aerial surveys flown in Delaware Bay from 2004 to 2008 were consistently below 16,000 birds, with an alltime low of only 12,375 red knots found in 2007. In recent years, the highest concentrations of red knots at the Delaware Bay stopover have been within Mispillion Harbor, Delaware, an area that has likely been undercounted during past aerial surveys. Beginning in 2009, a new survey methodology was implemented for the Delaware Bay stopover area to include ground counts that more accurately reflect concentrations of red knots using Mispillion Harbor and to include aerial surveys of red knots using Atlantic coastal marshes near Stone Harbor, New Jersey. The highest count using the new methodology showed 27,187 red knots in Delaware and 900 in New Jersey, for a total count of 28,087 birds. Poor weather conditions in 2009 prevented aerial surveys during the period when red knots were thought to be at a peak, so no comparison with the past aerial

survey peak count method was possible. While the number of red knots using Delaware Bay likely increased in 2009, much of the increase is attributed to improved survey methods and an expanded area of coverage.

Counts in recent years in South America also are substantially lower than in the past. In the mid-1980s, an estimated 67,500 red knots were observed from Tierra del Fuego, Chile and along the coast of Argentina to northern Patagonia. Since 2003, the largest concentrations of red knots have occurred at the principal wintering areas in Bahia Lomas and other portions of Tierra del Fuego and southern Patagonia, with few birds found further north along the coast of Argentina. More than 50,000 red knots were counted in the principal winter areas in 1985 and 2000. Since 2005, fewer than 18,000 have been counted within the same area, with only 16,260 red knots observed in 2010.

The primary threat to the red knot has been attributed to destruction and modification of its habitat, particularly the reduction in key food resources resulting from reductions in horseshoe crabs, which are harvested primarily for use as bait and secondarily to support a biomedical industry. Commercial harvest increased substantially in the 1990s. Research shows that since 1998, a high proportion of red knots leaving the Delaware Bay failed to achieve threshold departure masses needed to fly to breeding grounds and survive an initial few days of snow cover, and this corresponded to reduced annual survival rates and reduced reproductive success. Since 1999, to protect the Atlantic coast population of the horseshoe crab and to increase availability of horseshoe crab eggs in Delaware Bay for hemispheric migratory shorebird populations, a series of timing restrictions and substantially lower harvest quotas have been adopted by the Atlantic States Marine Fisheries Commission, as well as by the States of New Jersey, Delaware, and Maryland. In March 2008, New Jersey passed legislation imposing a moratorium on horseshoe crab harvest or landing within the State until such time as the red knot has fully recovered.

The reductions in commercial horseshoe crab harvest by Atlantic coastal States since 1999 are substantial. From 2004 to 2009, annual landings of horseshoe crabs have been reduced by over 70 percent from the reference period landings of the mid- to late-1990s. For Delaware and New Jersey, the decline in horseshoe crab landings for bait has decreased from 726,660 reported in 1999 to a preliminary number of 102,659 crabs landed in Delaware in 2009 and no crabs harvested in New Jersey. No horseshoe crabs have been landed for bait in New Jersey since 2007 as a result of the State-imposed harvest moratorium. In the Delaware Bay area, continued recruitment of small horseshoe crabs has been observed, with a substantial increase in numbers of the smallest sizes of immature males and females in 2009 over previous years. The continued increase in immature males and females would be expected in a recovering population and suggests recent harvest restrictions may be having the desired effect, but it may be several more years until this increase is realized in spawning age adults, as horseshoe crabs need 8 to10 years to reach sexual maturity.

Other identified threat factors include habitat destruction due to beach erosion and various shoreline protection and stabilization projects that are affecting areas used by migrating knots for foraging, the inadequacy of existing regulatory mechanisms, human disturbance, and competition with other species for limited food resources. Also, the concentration of red knots in the Delaware Bay areas and at a relatively small number of wintering areas makes the species vulnerable to potential large-scale events such as oil spills or severe weather. Overall, we conclude that the threats, in particular the modification of habitat through harvesting of horseshoe crabs, are severe enough to put the viability of the knot at substantial risk and is therefore of a high magnitude. The threats are currently occurring, and therefore imminent because of continuing suppressed horseshoe-crab-egg forage conditions for red knot within the Delaware Bay stopover. Based on imminent threats of a high magnitude, we retain an LPN of 3 for this subspecies.

Yellow-billed loon (*Gavia adamsii*)—The following summary is based on information contained in our files and the petition we received on April 5, 2004. The yellow-billed loon is a migratory bird. Solitary pairs breed on lakes in the arctic tundra of the United States, Russia, and Canada from June to September. During the remainder of the year, the species winters in more southern coastal waters of the Pacific Ocean and the Norway and North Seas. During most of the year, individual yellow-billed loons are so widely dispersed that high adult mortality from any single factor is unlikely. However, during migration, yellow-billed loons are more concentrated and are subject to subsistence harvest that at current levels appears to be unsustainable, based on the best available information; the population could decline substantially if such harvest continues. Future subsistence harvests in Alaska, by themselves, constitute a threat to the species rangewide. This subsistence harvest is occurring despite the species being closed to hunting under the Migratory Bird Treaty Act. In addition, up to several hundred yellow-billed loons may be taken annually on Russian breeding grounds, and small numbers of yellow-billed loons are reported in harvests in other areas in Alaska outside of the subsistence harvest area and in Canada.

Other risk factors evaluated, including oil and gas development (*i.e.,* disturbance, changes in freshwater chemistry and pollutant loads, and changes in freshwater hydrology); pollution; overfishing; climate change; vessel traffic; commercial- and subsistence-fishery bycatch; and contaminants other than those associated with oil and gas, were not found to be threats to the species. Although these other risk factors may not rise to the level of a threat individually, when taken collectively with the effects of subsistence hunting in other areas, they may reduce the rangewide population even further. One or more of the threats discussed above is occurring throughout the range of the yellow-billed loon, either in its breeding or wintering grounds, or during migration; therefore, the threats are imminent. The magnitude of the primary threat to the species, subsistence harvest, is moderate. Although subsistence harvest is ongoing, the numbers taken have varied substantially between years. In addition, we have concerns about the precision of the numbers reported. Thus, we assigned the yellow-billed loon an LPN of 8.

Kittlitz's murrelet (*Brachyramphus brevirostris*)—The following summary is based on information contained in our files and the petition we received on May 9, 2001. Kittlitz's murrelet is a small diving seabird whose entire North American population, and a majority of the world's population, inhabits Alaskan coastal waters discontinuously from Point Lay south to northern portions of Southeast Alaska. Most Kittlitz's murrelets are associated with tidewater glaciers, but some occur in areas not currently influenced by glaciers. Genetic analyses suggest very low rates of immigration and emigration between Kittlitz's murrelets in the western Aleutian Islands, where there are no extant glaciers, and birds occupying mainland fjords, where there are glaciers today. For 2010, we estimate

the world-wide abundance of Kittlitz's murrelets to be between 30,900 and 56,800 individuals. In some regions of Alaska, Kittlitz's murrelets have declined at a rate of up to 20 percent between two decadal periods (1988–1999 and 2004–2007).

Threats to Kittlitz's murrelets include large-scale processes such as global climate change and marine regime shifts. These large-scale processes may influence Kittlitz's murrelet survival and reproduction. Glacial retreat is a global phenomenon that affects many of the glaciers with which Kittlitz's murrelets are associated. This glacial retreat may be changing forage fish availability, and may contribute to loss of nesting habitat and increased predation on Kittlitz's murrelets. Other threats include oil spills, bycatch in commercial gillnet fisheries, and disturbance by tour boats. Catastrophic events such as oil spills could have a significant negative effect on the population of this already diminished species. Kittlitz's murrelets are believed to have been negatively affected by the *Exxon Valdez* oil spill in Prince William Sound in 1989. Mortality as bycatch in commercial fishing may be a significant factor in their population decline. Tour boat visitation to glacial fjords is a growing industry, and this activity may increasingly disrupt Kittlitz's murrelet feeding behavior; tour boats may also provide artificial perch sites for avian predators.

Based on the observed population trajectory and the severity of ongoing threats (rapid glacial retreat, acute and chronic oil spills, commercial gillnet fishing, and human disturbance from tour boats), the threats to this species are high in magnitude and imminent. Therefore, we assigned an LPN of 2 to this species.

Xantus's murrelet (*Synthliboramphus hypoleucus*)—The following summary is based on information contained in our files and the petition we received on April 16, 2002. The Xantus's murrelet is a small seabird in the family Alcidae that occurs along the west coast of North America in the United States, Mexico, and Canada. The species has a limited breeding distribution, only nesting on the Channel Islands in southern California and on islands off the west coast of Baja California, Mexico. Although data on population trends are scarce, the population is suspected to have declined greatly over the last century, mainly due to introduced predators such as rats (*Rattus* sp.) and feral cats (*Felis catus*) to nesting islands, with possible extirpations on three islands in Mexico. A dramatic decline (up to 70 percent) from 1977 to 1991 was detected at the largest nesting colony in southern California, possibly due to high levels of predation on eggs by the endemic deer mouse (*Peromyscus maniculatus elusus*). Identified threats include introduced predators at nesting colonies, oil spills and oil pollution, reduced prey availability, human disturbance, and artificial light pollution.

Although substantial declines in the Xantus's murrelet population likely occurred over the last century, some of the largest threats are being addressed, and, to some degree, ameliorated. Declines and possible extirpations at several nesting colonies were thought to have been caused by nonnative predators, which have been removed from many of the islands where they once occurred. Most notably, since 1994, Island Conservation and Ecology Group has systematically removed rats, cats, and dogs from every murrelet nesting colony in Mexico, with the exception of cats and dogs on Guadalupe Island. In 2002, rats were eradicated from Anacapa Island in southern California, which has resulted in improvements in reproductive success at that island. In southern California, efforts to restore nesting habitat on Santa Barbara Island through the Montrose Settlements Restoration Project may benefit the Xantus's murrelet population at that island.

Artificial lighting from squid fishing and other vessels, or lights on islands, remains a potential threat to the species. Bright lights make Xantus's murrelets more susceptible to predation, and they can also become disoriented and exhausted from continual attraction to bright lights. Chicks can become disoriented and separated from their parents at sea, which could result in death of the dependent chicks. High-wattage lights on commercial market squid (*Loligo opalescens*) fishing vessels used at night to attract squid to the surface of the water in the Channel Islands was the suspected cause of unusually high predation on Xantus's murrelets by western gulls (*Larus occidentalis*) and barn owls (*Tyto alba*) at Santa Barbara Island in 1999. To address this threat, in 2000, the California Fish and Game Commission required light shields and a limit of 30,000 watts per boat; it is unknown if this is sufficient to reduce impacts. Since 1999, no significant squid fishing has occurred near any of the colonies in the Channel Islands; however, this remains a potential future threat.

A proposal to build three liquid natural gas facilities near the Channel Islands could affect the nesting colonies due to bright lights at night from the facility and visiting tanker vessels, noise from the facilities or from helicopters visiting the facilities, and the threat of oil spills associated with visiting tanker vessels. However, these facilities are early in the complex and long-term planning processes, and it is possible that none of these facilities will be built. In addition, none of them are directly adjacent to nesting colonies, where their impacts would be expected to be more significant. The remaining threats to the species are of a high magnitude but nonimminent. Therefore, we retained an LPN of 5 for this species.

Lesser prairie-chicken (*Tympanuchus pallidicinctus*)—The following summary is based on information contained in our files and the petition received on October 5, 1995. Additional information can be found in the 12-month finding published on June 7, 1998 (63 FR 31400). Biologists estimate that the occupied range has declined by 92 percent since the 1800s. The most serious threats to the lesser prairie-chicken are loss of habitat from conversion of native rangelands to introduced forages and cultivated crops; conversion of suitable restored habitat in the Conservation Reserve Program to cropland; cumulative habitat degradation caused by severe grazing; and energy development, including transmission, and wind, oil, and gas development. Additional threats are woody plant invasion of open prairies due to fire suppression, herbicide use (including resumption of herbicide use in shinnery oak habitat), and habitat fragmentation caused by structural and transportation developments. Many of these threats may exacerbate the normal effects of periodic drought on lesser prairie-chicken populations. In many cases, the remaining suitable habitat has become fragmented by the spatial arrangement of these individual threats. Habitat fragmentation can be a threat to the species through several mechanisms: Remaining habitat patches may become smaller than necessary to meet the requirements of individuals and populations, necessary habitat heterogeneity may be lost to areas of homogeneous habitat structure, and the probability of recolonization decreases as the distance between suitable habitat patches expands. We have determined that the overall magnitude of threats to the lesser prairie-chicken throughout its range is high, and that the threats are ongoing, and thus imminent. Consequently, we have retained an LPN of 2 for this species.

Greater sage-grouse (*Centrocercus urophasianus*), Columbia Basin DPS—The following summary is based on information in our files and a petition,

dated May 14, 1999, requesting the listing of the Washington population of the western sage-grouse (*C. u. phaios*). On May 7, 2001, we concluded that listing the Columbia Basin DPS of the western sage-grouse was warranted, but precluded by higher-priority listing actions (66 FR 22984); this population was historically found in northern Oregon and central Washington. Following our May 7, 2001, finding, the Service received additional petitions requesting listing actions for various other greater sage-grouse populations, including one for the nominal western subspecies, dated January 24, 2002, and three for the entire species, dated June 18, 2002, and March 19 and December 22, 2003. The Service subsequently found that the petition for the western subspecies did not present substantial information (68 FR 6500), and that listing the greater sage-grouse throughout its historical range was not warranted (70 FR 2244). These latter findings were remanded to the Service for further consideration. In response, we initiated a new range-wide status review for the entire species (73 FR 10218). On March 5, 2010, we found that listing of the greater sage-grouse was warranted but precluded by higher priority listing actions (75 FR 13909; March 23, 2010), and it was added to the list of candidates. We also found that the western subspecies of the greater sage-grouse, the taxonomic entity we relied on in our DPS analysis for the Columbia Basin population, was no longer considered a valid subspecies. In light of our conclusions regarding the invalidity of the western sage-grouse subspecies, the significance of the Columbia Basin DPS to the greater sage-grouse will require further review. As priorities allow the Service intends to complete an analysis to determine if this population continues to warrant recognition as a DPS in accordance with our Policy Regarding the Recognition of Distinct Population (61 FR 4722; February 7, 1996). Until that time, the Columbia Basin DPS will remain a candidate for listing as a separate population of greater sage-grouse. Even if this population does not meet our DPS policy, the greater sage-grouse population in the Columbia Basin will remain a candidate for listing as part of the greater sage-grouse entity.

Band-rumped storm-petrel, Hawaii DPS (*Oceanodroma castro*)—The following summary is based on information contained in our files and the petition we received on May 8, 1989. No new information was provided in the second petition received on May 11, 2004. The band-rumped storm-petrel is a small seabird that is found in several areas of the subtropical Pacific and Atlantic Oceans. In the Pacific, there are three widely separated breeding populations—one in Japan, one in Hawaii, and one in the Galapagos. Populations in Japan and the Galapagos are comparatively large and number in the thousands, while the Hawaiian birds represent a small, remnant population of possibly only a few hundred pairs. Band-rumped storm-petrels are most commonly found in close proximity to breeding islands. The three populations in the Pacific are separated by long distances across the ocean where birds are not found. Extensive at-sea surveys of the Pacific have revealed a broad gap in distribution of the band-rumped storm-petrel to the east and west of the Hawaiian Islands, indicating that the distribution of birds in the central Pacific around Hawaii is disjunct from other nesting areas. The available information indicates that distinct populations of band-rumped storm-petrels are definable and that the Hawaiian population is distinct based on geographic and distributional isolation from other band-rumped storm-petrel populations in Japan, the Galapagos, and the Atlantic Ocean. A population also can be considered discrete if it is delimited by international boundaries that have differences in management control of the species. The Hawaiian population of the band-rumped storm-petrel is the only population within U.S. borders or under U.S. jurisdiction. Loss of the Hawaiian population would cause a significant gap in the distribution of the band-rumped storm-petrel in the Pacific, and could result in the complete isolation of the Galapagos and Japan populations without even occasional genetic exchanges. Therefore, the population is both discrete and significant, and constitutes a DPS.

The band-rumped storm-petrel probably was common on all of the main Hawaiian Islands when Polynesians arrived about 1,500 years ago, based on storm-petrel bones found in middens on the island of Hawaii and in excavation sites on Oahu and Molokai. Nesting colonies of this species in the Hawaiian Islands currently are restricted to remote cliffs on Kauai and Lehua Island and high-elevation lava fields on Hawaii. Vocalizations of the species were heard in Haleakala Crater on Maui as recently as 2006; however, no nesting sites have been located on the island to date. The significant reduction in numbers and range of the band-rumped storm-petrel is due primarily to predation by nonnative predators introduced by humans, including the domestic cat (*Felis catus*), small Indian mongoose (*Herpestes auropunctatus*), common barn owl (*Tyto alba*), black rat (*R. rattus*), Polynesian rat (*R. exulans*), and Norway rat (*R. norvegicus*), which occur throughout the main Hawaiian Islands, with the exception of the mongoose, which is not established on Kauai. Attraction of fledglings to artificial lights, which disrupts their night-time navigation, resulting in collisions with building and other objects, and collisions with artificial structures such as communication towers and utility lines are also threats. Erosion of nest sites caused by the actions of nonnative ungulates is a potential threat in some locations. Efforts are under way in some areas to reduce light pollution and mitigate the threat of collisions, but there are no large-scale efforts to control nonnative predators in the Hawaiian Islands. The threats are imminent because they are ongoing, and they are of a high magnitude because they can severely affect the survival of this DPS leading to a relatively high likelihood of extinction. Therefore, we assign this distinct population segment an LPN of 3.

Elfin-woods warbler (*Dendroica angelae*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Dendroica angelae,* or elfin-woods warbler, is a small entirely black and white warbler, distinguished by its white eyebrow stripe, white patches on ear covers and neck, incomplete eye ring, and black crown. The elfin-woods warbler was at first thought to occur only in the high elevation dwarf or elfin forests, but has since been found at lower elevations including shade coffee plantations and secondary forests. This species builds a compact cup nest, usually close to the trunk and well hidden among the epiphytes of a small tree, and its breeding season extends from March to June. It forages in the middle part of trees, gleaning insects from leaves in the outer portion of the tree crown. The elfin-woods warbler has been documented from four locations in Puerto Rico: Luquillo Mountains (El Yunque National Forest), Sierra de Cayey, and the Commonwealth forests of Maricao and Toro Negro. However, it has not been recorded again in Toro Negro and Cayey, following the passing of Hurricane Hugo in 1989. In 2003 and 2004, surveys were conducted for the elfin-woods warbler in the Carite Commonwealth Forest, Toro Negro

Forest, Guilarte Forest, Bosque del Pueblo, Maricao Forest and the El Yunque National Forest, but only detected the species in the latter two. In the Maricao Commonwealth Forest, 778 elfin woods warblers were recorded, and in the El Yunque National Forest, 196 elfin-woods warblers were recorded.

The elfin-woods warbler is currently threatened by habitat modification. Destruction of elfin forest and *Podocarpus* forest by the installation of infrastructure (*e.g.,* telecommunication towers, recreational facilities) threatens the long-term survival of this species. Loss of this type of habitat has been curtailed but potential for loss still exists due to Commonwealth agencies other than DNER. Furthermore, restoration of this habitat would take decades to complete. Present regulatory processes, both Commonwealth and Federal, promote the protection of these areas. Conversion of elfin-woods warbler habitat of better quality (*e.g.,* mature secondary forests, young secondary forests, and shaded-coffee plantations) along the periphery of the Maricao Commonwealth Forest to marginal habitat (*e.g.,* pastures, dry slope forests, residential rural forests, gallery forests, and un-shaded coffee plantations) may result in ineffective corridors for dispersal and expansion of elfin-woods warbler populations. While there is an effort to restore sun-coffee plantations to shade-coffee habitat, other habitats adjacent to the Maricao Forest may still be affected by residential development.

The listing priority number was originally assessed as a 5 (high magnitude, non-imminent threats). This was changed during the 2009 CNOR. Our analysis of the five listing factors revealed that only factors A and D applied to the species. Although habitat modification is occurring, it is limited, as the species is found mostly on protected lands managed by the Commonwealth and Federal agencies. We found no indication that the two populations of elfin-woods warbler are declining in numbers. We also found that it can thrive in disturbed and plantation habitats, and rebounds and recovers well, in a relatively short time, from the damaging effects of hurricanes to the forest structure. Therefore, the magnitude of threats is moderate to low. These threats are not imminent, because most of the range of the elfin-woods warbler is within protected lands. As a result, we assigned an LPN of 11 to this species.

Reptiles

Northern Mexican Gartersnake (*Thamnophis eques megalops*)—The following summary is based on information contained in our files. The northern Mexican gartersnake generally occurs in three types of habitat: (1) Ponds and cienegas; (2) lowland river riparian forests and woodlands; and (3) upland stream gallery forests. Within the United States, the distribution of the northern Mexican gartersnake has been reduced by close to 90 percent and it occurs in fragmented populations within the middle/upper Verde River drainage, middle/lower Tonto Creek, and the upper Santa Cruz River, as well as in a small number of isolated wetland habitats in southeastern Arizona; its status in New Mexico is uncertain. Within Mexico, the northern Mexican gartersnake is distributed along the Sierra Madre Occidental and the Mexican Plateau in the Mexican states of Sonora, Chihuahua, Durango, Coahila, Zacatecas, Guanajuato, Nayarit, Hidalgo, Jalisco, San Luis Potosí, Aguascalientes, Tlaxacala, Puebla, México, Michoacán, Oaxaca, Veracruz, and Querétaro. The primary threat to the northern Mexican gartersnake is competition and predation from nonnative species such as sportfish, bullfrogs, and crayfish. Degradation and elimination of its habitat and native prey base are also significant threats, most notably in areas where nonnative species co-occur. Threats, particularly competition and predation by nonnative species, are high in magnitude since they result in direct mortality or reduced reproductive capacity and may be irreversible in complex habitat resulting in a relatively high likelihood of extinction. The threats are ongoing and, therefore, imminent. Thus, we retained an LPN of 3 for this subspecies.

Sand dune lizard (*Sceloporus arenicolus*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The eastern massasauga is one of three recognized subspecies of massasauga. It is a small, thick-bodied rattlesnake that occupies shallow wetlands and adjacent upland habitat in portions of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, Ohio, Pennsylvania, Wisconsin, and Ontario.

Although the current range of *S. c. catenatus* resembles the subspecies' historical range, the geographic distribution has been restricted by the loss of the subspecies from much of the area within the boundaries of that range. Approximately 40 percent of the counties that were historically occupied by *S. c. catenatus* no longer support the subspecies. *S. c. catenatus* is currently listed as endangered in every State and province in which it occurs, except for Michigan where it is designated as a species of special concern. Each State and Canadian province across the range of *S. c. catenatus* has lost more than 30 percent, and for the majority more than 50 percent, of their historical populations. Furthermore, less than 35 percent of the remaining populations are considered secure. Approximately 59 percent of the remaining *S. c. catenatus* populations occur wholly or in part on public land, and Statewide and/or site-specific Candidate Conservation Agreements with Assurances (CCAAs) are currently being developed for many of these areas in Iowa, Illinois, Michigan, and Wisconsin. In 2004, a Candidate Conservation Agreement (CCA) with the Lake County Forest Preserve District in Illinois was completed. In 2005, a CCA with the Forest Preserve District of Cook County in Illinois was completed. In 2006, a CCAA with the Ohio Department of Natural Resources Division of Natural Areas and Preserves was completed for Rome State Nature Preserve in Ashtabula County. The magnitude of threats is moderate at this time. However, populations soon to be under CCAs and CCAAs have a low to moderate likelihood of persisting and remaining viable. Other populations are likely to suffer additional losses in abundance and genetic diversity and some will likely be extirpated unless threats are removed in the near future. Declines have continued or may be accelerating in several states. Thus, we are monitoring the status of this species to determine if a change in listing priority is warranted. Furthermore, we are working with several experts and partners in the development of an extinction risk model for the subspecies, and the results of this work may indicate that a change in listing priority number is appropriate. Threats of habitat modification, habitat succession, incompatible land management practices, illegal collection for the pet trade, and human persecution are ongoing and imminent threats to many

remaining populations, particularly those inhabiting private lands. We conclude that emergency listing is not warranted and have kept the LPN at 9 for this subspecies.

Black pine snake (*Pituophis melanoleucus lodingi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. There are historical records for the black pine snake from one parish in Louisiana, 14 counties in Mississippi, and 3 counties in Alabama west of the Mobile River Delta. Black pine snake surveys and trapping indicate that this species has been extirpated from Louisiana and from four counties in Mississippi. Moreover, the distribution of remaining populations has become highly restricted due to the destruction and fragmentation of the remaining longleaf pine habitat within the range of the subspecies. Most of the known Mississippi populations are concentrated on the DeSoto National Forest. Populations occurring on properties managed by State and other governmental agencies as gopher tortoise mitigation banks or wildlife sanctuaries represent the best opportunities for long-term survival of the subspecies in Alabama. Other factors affecting the black pine snake include vehicular mortality and low reproductive rates, which magnify the threats from destruction and fragmentation of longleaf pine habitat and increase the likelihood of local extinctions. Due to the imminent threats of high magnitude caused by the past destruction of most of the longleaf pine habitat of the black pine snake, and the continuing persistent degradation of what remains, we assigned an LPN of 3 to this subspecies.

Louisiana pine snake (*Pituophis ruthveni*)—The following summary is based on information contained in our files and the petition we received on July 19, 2000. The Louisiana pine snake historically occurred in the fire-maintained longleaf pine ecosystem within west-central Louisiana and extreme east-central Texas. Most of the historical longleaf pine habitat of the Louisiana pine snake has been destroyed or degraded due to logging, fire suppression, roadways, short-rotation silviculture, and grazing. In the absence of recurrent fire, suitable habitat conditions for the Louisiana pine snake and its primary prey, the Baird's pocket gopher (*Geomys breviceps*), are lost due to vegetative succession. The loss and fragmentation of the longleaf pine ecosystem has resulted in extant Louisiana pine snake populations that are isolated and small. Trapping and occurrence data indicate the Louisiana pine snake is currently restricted to seven disjunct populations; five of the populations occur on federal lands and two occur mainly on private industrial timberlands. Currently occupied habitat in Louisiana and Texas is estimated to be approximately 163,000 acres, with 53 percent occurring on public lands and 47 percent in private ownership.

All remnant Louisiana pine snake populations have been affected by habitat loss and all require active habitat management. A Candidate Conservation Agreement (CCA) was completed in 2003 to maintain and enhance occupied and potential habitat on public lands, and to protect known Louisiana pine snake populations. On Federal lands, signatories of the Louisiana pine snake CCA currently conduct habitat management (i.e., prescribed burning and thinning) that is beneficial to the Louisiana pine snake. This proactive habitat management has likely slowed or reversed the rate of Louisiana pine snake habitat degradation on many portions of federal lands. The largest extant Louisiana pine snake population exists on private industrial timberlands. Although two conservation areas are managed to benefit Louisiana pine snakes on this property, the majority of the intervening occupied habitat is threatened by land management activities (habitat conversion to short-rotation pine plantations) that decrease habitat quality.

Three of the remnant Louisiana pine snake populations may be vulnerable to decreased demographic viability or other factors associated with low population sizes and demographic isolation. Although these remnant Louisiana pine snake populations are intrinsically vulnerable and thus threatened by these factors, it is not known if they are presently actually facing these threats. Because all extant populations are currently isolated and fragmented by habitat loss in the matrix between populations, there is little potential for dispersal among remnant populations or for the natural re-colonization of vacant habitat patches. Thus, the loss of any remnant population is likely to be permanent. Other factors affecting the Louisiana pine snake throughout its range include low fecundity, which magnifies other threats and increases the likelihood of local extirpations, and vehicular mortality, which may significantly affect Louisiana pine snake populations.

While the extent of Louisiana pine snake habitat loss has been great in the past and much of the remaining habitat has been degraded, habitat loss does not represent an imminent threat, primarily because the rate of habitat loss appears to be declining on public lands. However, all populations require active habitat management, and the lack of adequate habitat remains a threat for several populations. The potential threats to a large percentage of extant Louisiana pine snake populations, coupled with the likely permanence of these effects and the species' low fecundity and low population sizes (based on capture rates and occurrence data), lead us to conclude that the threats have significant effect on the survival of the species and therefore remain high in magnitude. Thus, based on nonimminent, high-magnitude threats, we assign a listing priority number of 5 to this species.

Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Sonoyta mud turtle occurs in a spring and pond at Quitobaquito Springs on Organ Pipe Cactus National Monument in Arizona, and in the Rio Sonoyta and Quitovac Spring of Sonora, Mexico. Loss and degradation of stream habitat from water diversion and groundwater pumping, along with its very limited distribution, is the primary threat to the Sonoyta mud turtle. Sonoyta mud turtles are highly aquatic and depend on permanent water for survival. The area of southwest Arizona and northern Sonora where the Sonoyta mud turtle occurs is one of the driest regions of the southwest. Continuing drought, irrigated agriculture, and development in the region, is expected to cause surface water in the Rio Sonoyta to dwindle further and therefore have a significant impact on the survival of this subspecies, which may also be vulnerable to aerial spraying of pesticides on nearby agricultural fields. We retained an LPN of 3 for this subspecies because threats are of a high magnitude and continue to date, and therefore are imminent.

Amphibians

Columbia spotted frog, Great Basin DPS (*Rana luteiventris*)—The following summary is based on information contained in our files and the petition we received on May 1, 1989. Currently, Columbia spotted frogs appear to be widely distributed throughout southwestern Idaho, southeastern Oregon, northeastern and central Nevada, but local populations within this general area appear to be small and isolated from each other. Recent work

by researchers in Idaho and Nevada have documented the loss of historically known sites, reduced numbers of individuals within local populations, and declines in the reproduction of those individuals. Small, highly fragmented populations, characteristic of the majority of existing populations of Columbia spotted frogs in the Great Basin, are highly susceptible to extinction processes.

Poor management of Columbia spotted frog habitat—including water development, improper grazing, mining activities, and nonnative species—has and continues to contribute to the degradation and fragmentation of habitat. Emerging fungal diseases such as chytridiomycosis and the spread of parasites may be contributing factors to Columbia spotted frog population declines throughout portions of its range. Effects of climate change, such as drought, and stochastic events such as fire often have detrimental effects to small isolated populations and can often exacerbate existing threats. A 10-year Conservation Agreement and Strategy was signed in September 2003 for both the Northeast and the Toiyabe subpopulations in Nevada. The goals of the conservation agreements are to reduce threats to Columbia spotted frogs and their habitat to the extent necessary to prevent populations from becoming extirpated throughout all or a portion of their historical range and to maintain, enhance, and restore a sufficient number of populations of Columbia spotted frogs and their habitat to ensure their continued existence throughout their historical range. Additionally, a Candidate Conservation Agreement with Assurances was completed in 2006 for the Owyhee subpopulation at Sam Noble Springs, Idaho. Several habitat enhancement projects have been conducted throughout their range which have benefitted these populations. Based on imminent threats of moderate magnitude, we assigned a listing priority number of 9 to this DPS of the Columbia spotted frog.

Mountain yellow-legged frog, Sierra Nevada DPS (*Rana muscosa*)—The following summary is based on information contained in our files and the petition received on February 8, 2000. Also see our 12-month petition finding published on January 16, 2003 (68 FR 2283) and our amended 12-month petition finding published on June 25, 2007 (72 FR 34657). The mountain yellow-legged frog inhabits the high-elevation lakes, ponds, and streams in the Sierra Nevada Mountains of California, from near 4,500 feet (ft) (1,370 meters (m)) to 12,000 ft (3,650 m). The distribution of the mountain yellow-legged frog is from Butte and Plumas Counties in the north to Tulare and Inyo Counties in the south. A separate population in southern California is already listed as endangered (67 FR 44382). Based on mitochondrial DNA, morphological, and acoustic studies, Vredenburg *et al.* recently recognized two distinct species of mountain yellow-legged frog in the Sierra Nevada, *R. muscosa* and *R. sierrae.* This taxonomic distinction has been recently adopted by the American Society of Ichthyologists and Herpetologists, the Herpetologists' League, and the Society for the Study of Amphibians and Reptiles. The Vredenburg study determined that two species exist, as described by Camp, but have different geographical ranges than first described. Camp described *R. muscosa* as only occurring in southern California. A recent study determined that *R. muscosa* also occurs in the southern portion of the Sierra Nevada, and *R. sierrae* occurs both in the southern and northern portions of the Sierra Nevada, with no range overlap. At this time, we have not adopted this taxonomic distinction of two species and continue to recognize mountain yellow-legged frogs in the Sierra Nevada Mountains of California as *R. muscosa* and as the candidate entity.

Predation by introduced trout is the best-documented cause of the decline of the Sierra Nevada mountain yellow-legged frog, because it has been repeatedly observed that fishes and mountain yellow-legged frogs rarely co-exist. Mountain yellow-legged frogs and trout (native and nonnative) do co-occur at some sites, but these co-occurrences probably are mountain yellow-legged frog populations with negative population growth rates in the absence of immigration. To help reverse the decline of the mountain yellow-legged frog, the Sequoia and Kings Canyon National Parks have been removing introduced trout since 2001. Over 18,000 introduced trout have been removed from 11 lakes since the project started in 2001. The lakes are completely-to-mostly fish-free and substantial mountain yellow-legged frog population increases have resulted. The California Department of Fish and Game has also removed or is in the process of removing nonnative trout from a total of between 10 and 20 water bodies in the Inyo, Humboldt-Toiyabe, Sierra, and El Dorado National Forests. In the El Dorado National Forest golden trout were removed from Leland Lakes, and attempts have been made to remove trout from two sites near Gertrude Lake, three lakes in the Pyramid Creek watershed, and a tributary of Cole Creek; no data showing increase in mountain yellow-legged frogs at these sites is available.

In California, chytridiomycosis, more commonly known as chytrid fungus (*Batrachochytrium dendrobatidis*) or Bd, has been detected in many amphibian species, including the mountain yellow-legged frog within the Sierra Nevada. Recent research has shown that this pathogenic fungus has become widely distributed throughout the Sierra Nevada, and that infected mountain yellow-legged frogs often die soon after metamorphosis. Several infected and uninfected populations were monitored in Sequoia and Kings Canyon National Parks over multiple years, documenting dramatic declines and extirpations in infected but not in uninfected populations. In the summer of 2005, 39 of 43 populations assayed in Yosemite National Park were positive for chytrid fungus.

The current distribution of the Sierra Nevada mountain yellow-legged frog is restricted primarily to public lands at high elevations, including streams, lakes, ponds, and meadow wetlands located on national forests, including wilderness and non-wilderness on the forests, and national parks. In several areas where detailed studies of the effects of chytrid fungus on the mountain yellow-legged frog are on-going, substantial declines have been observed over the past several years. For example, in 2007 surveys in Yosemite National Park, mountain yellow-legged frogs were not detectable at 37 percent of 285 sites where they had been observed in 2000–2002; in 2005 in Sequoia and Kings Canyon National Parks, mountain yellow-legged frogs were not detected at 54 percent of sites where they had been recorded 3 to 8 years earlier. A compounding effect of disease-caused extinctions of mountain yellow-legged frogs is that recolonization may never occur, because streams connecting extirpated sites to extant populations now contain introduced fishes, which act as barriers to frog movement within metapopulations. The most recent assessment of the species status in the Sierra Nevada indicates that mountain-yellow legged frogs occur at less than 8 percent of the sites from which they were historically observed. A group of prominent scientists further suggest a 10 percent decline per year in the number of remaining *Rana mucosa* populations is likely. Based on threats that are imminent (because they are ongoing) and high-magnitude (because they significantly affect the survival of the DPS throughout its range), we continue

to assign the population of mountain yellow-legged frog in the Sierra Nevada an LPN of 3.

Oregon spotted frog (*Rana pretiosa*)—The following summary is based on information contained in our files and the petition we received on May 4, 1989. Historically, the Oregon spotted frog ranged from British Columbia to the Pit River drainage in northeastern California. Based on surveys of historical sites, the Oregon spotted frog is now absent from at least 76 percent of its former range. The majority of the remaining Oregon spotted frog populations are small and isolated.

The threats to the species' habitat include development, livestock grazing, introduction of nonnative plant species, vegetation succession, changes in hydrology due to construction of dams and alterations to seasonal flooding, lack of management of exotic vegetation, predators, and poor water quality. Additional threats to the species are predation by nonnative fish and introduced bullfrogs; competition with bullfrogs and nonnative fish for habitat; and diseases, such as oomycete water mold *Saprolegnia* and chytrid fungus infections. The magnitude of threat is high for this species because this wide range of threats to both individuals and their habitats could seriously reduce or eliminate any of these isolated populations and further reduce the species' range and potential survival. Habitat restoration and management actions have not prevented population declines. The threats are imminent because each population is faced with multiple ongoing and potential threats as identified above. Therefore, we retain an LPN of 2 for the Oregon spotted frog.

Relict leopard frog (*Lithobates onca*)—The following summary is based on information contained in our files and the petition we received on May 9, 2002. Natural relict leopard frog populations are currently only known to occur in two general areas in Nevada: Near the Overton Arm area of Lake Mead and Black Canyon below Lake Mead. These two areas comprise a small fraction of the historical distribution of the species, which included: springs, streams, and wetlands found within the Virgin River drainage downstream from the vicinity of Hurricane, Utah; along the Muddy River, Nevada; and along the Colorado River from its confluence with the Virgin River downstream to Black Canyon below Lake Mead, Nevada and Arizona.

Suggested factors contributing to the decline of the species include alteration of aquatic habitat due to agriculture and water development, including regulation of the Colorado River, and the introduction of exotic predators and competitors. In 2005, the National Park Service, in cooperation with the Service and various other Federal, State, and local partners, developed a conservation agreement and strategy intended to improve the status of the species through prescribed management actions and protection. Conservation actions identified for implementation in the agreement and strategy include captive rearing of tadpoles for translocation and refugium populations, habitat and natural history studies, habitat enhancement, population and habitat monitoring, and translocation. New sites within the historical range of the species have been successfully established with captive-reared frogs. Conservation is proceeding under the agreement and strategy; however, additional time is needed to determine whether or not the agreement and strategy will be effective in eliminating or reducing the threats to the point that the relict leopard frog can be removed from candidate status. However, because of these conservation efforts, the magnitude of existing threats is low to moderate. These threats remain nonimminent since there are no pending projects or actions that would adversely affect frog populations or threaten surface water associated with known sites occupied by the frog. Therefore, we assigned an LPN of 11 to this species.

Austin blind salamander (*Eurycea waterlooensis*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Austin blind salamander is known to occur in and around three of the four spring sites that comprise the Barton Springs complex in the City of Austin, Travis County, Texas. Primary threats to this species are degradation of water quality due to expanding urbanization. The Austin blind salamander depends on a constant supply of clean water in the Edwards Aquifer discharging from Barton Springs for its survival. Urbanization dramatically alters the normal hydrologic regime and water quality of an area. Increased impervious cover caused by development increases the quantity and velocity of runoff that leads to erosion and greater pollution transport. Pollutants and contaminants that enter the Edwards Aquifer are discharged in salamander habitat at Barton Springs and could have serious morphological and physiological effects to the salamander.

The Texas Commission on Environmental Quality adopted the Edwards Rules in 1995 and 1997, which require a number of water quality protection measures for new development occurring in the recharge and contributing zones of the Edwards Aquifer. However, Chapter 245 of the Texas Local Government Code permits "grandfathering" of State regulations. Grandfathering allows developments to be exempted from any new local or State requirements for water quality controls and impervious cover limits if the developments were planned prior to the implementation of such regulations. As a result of the grandfathering law, very few developments have followed the Edwards Rules. New developments are still obligated to comply with regulations that were applicable at the time when project applications for development were first filed. In addition, it is significant that even if they were followed with every new development, the Edwards Rules do not span the entire watershed for Barton Springs. Consequently, development occurring outside these jurisdictions can have negative consequences on water quality and thus have an impact on the species.

Water-quality impacts threaten the continued existence of the Austin blind salamander by altering physical aquatic habitats and the food sources of the salamander. We consider the threats to be imminent because urbanization is ongoing and continues to expand over the Barton Springs Segment of the Edwards Aquifer and water quality continues to degrade. While the City of Austin and many other partners are actively working on conservation of the Barton Springs salamander, and the Austin blind salamander benefits from all of the ongoing conservation actions that are being conducted for the Barton Springs salamander, these efforts have not yet been successful in improving water quality. In addition, the existence of the species continues to be threatened by hazardous chemical spills within the Barton Springs Segment of the Edwards Aquifer, which could result in direct mortality. Because the Austin blind salamander is known from only three clustered spring sites and must rely on clear, clean spring discharges from the Edwards Aquifer for its survival, degraded water quality poses a severe threat to the entire population, and is therefore a high-magnitude threat. Thus, we maintained the LPN of 2 for this species.

Georgetown salamander (*Eurycea naufragia*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Georgetown salamander is known from spring outlets along five tributaries to the San Gabriel River and

one cave in the City of Georgetown, Williamson County, Texas. The Georgetown salamander has a very limited distribution and depends on a constant supply of clean water from the Northern Segment of the Edwards Aquifer for its survival.

Primary threats to this species are degradation of water quality due to expanding urbanization. Increased impervious cover by development increases the quantity and velocity of runoff that leads to erosion and greater pollution transport. Pollutants and contaminants that enter the Edwards Aquifer are discharged from spring outlets in salamander habitat and have serious morphological and physiological effects to individuals of the species.

The Texas Commission on Environmental Quality adopted the Edwards Rules in 1995 and 1997, which require a number of water quality protection measures for new development occurring in the recharge and contributing zones of the Edwards Aquifer. New developments are still obligated to comply with regulations that were applicable at the time when project applications were first filed. However, Chapter 245 of the Texas Local Government Code permits "grandfathering" of state regulations. Grandfathering allows developments to be exempted from any new local or state requirements for water quality controls and impervious cover limits if the developments were planned prior to the implementation of such regulations. As a result of the grandfathering law, very few developments have followed the Edwards Rules. In addition, it is significant that even if they were followed with every new development, the Edwards Rules do not span the entire watershed for the Edwards Aquifer. The TCEQ has developed voluntary water-quality protection measures for development in the Edwards Aquifer region of Texas; however, it is unknown if these measures will be implemented throughout a large portion of the watershed or if they will be effective in maintaining or improving water quality.

Development occurring outside the TCEQ's jurisdiction can have negative consequences on water quality and thus affect the species. Water-quality impacts threaten the continued existence of the Georgetown salamander by altering physical aquatic habitats and the food sources of the salamander. The threats are imminent because urbanization is ongoing and continues to expand over the Northern Segment of the Edwards Aquifer. However, Williamson County and the Williamson County Conservation Foundation are actively working to protect habitat and acquire land within the contributing watershed for the Georgetown salamander. Also, they are conducting monitoring and data collecting activities in an effort that is expected to lead to the development of a conservation strategy for this species. These conservation actions reduce the magnitude of the threat to the Georgetown salamander to a moderate level by reducing the amount of development occurring in the portion of the watershed that affects the species. Thus, we maintained the LPN of 8 for this species.

Jollyville Plateau salamander (*Eurycea tonkawae*)—The following summary is based on information gathered during a status review of this species (72 FR 71039, December 13, 2007). The Jollyville Plateau salamander occurs in the Jollyville Plateau and Brushy Creek areas of the Edwards Plateau in Travis and WilliamsonCounties, Texas. This species has a limited distribution and depends on a constant supply of clean water from the Northern Segment of the Edwards Aquifer for its survival. The primary threat to this species is degradation of water quality due to expanding urbanization. Increased impervious cover by development increases the quantity and velocity of runoff that leads to erosion and greater pollution transport. Pollutants and contaminants that enter the Edwards Aquifer are discharged from spring outlets in salamander habitat and have serious morphological and physiological effects on individual of the species.

The Texas Commission on Environmental Quality adopted the Edwards Rules in 1995 and 1997, which require a number of water quality protection measures for new development occurring in the recharge and contributing zones of the Edwards Aquifer. However, Chapter 245 of the Texas Local Government Code permits "grandfathering" of state regulations. Grandfathering allows developments to be exempted from any new local or state requirements for water quality controls and impervious cover limits if the developments were planned prior to the implementation of such regulations. As a result of the grandfathering law, very few developments have followed the Edwards Rules. New developments are still obligated to comply with regulations that were applicable at the time when project applications for development were first filed. In addition, it is significant that even if they were followed with every new development, the Edwards Rules do not span the entire watershed for the Edwards Aquifer. The TCEQ has developed voluntary water quality protection measures for development in the Edwards Aquifer region of Texas; however, it is unknown if these measures will be implemented throughout a large portion of the watershed or if they will be effective in maintaining or improving water quality.

Water-quality impacts threaten the continued existence of the Jollyville Plateau salamander by altering physical aquatic habitats and the food sources of the salamander, producing negative population responses. Such responses have been documented at both the individual level (mortalities and deformities) and the population level (significant declines in abundance over the last 10 years and extirpation at one site). We find the overall negative response by the salamander to be at a moderate level because deformities and deaths of salamanders have been limited in scope to a few localities and only one location may have experienced an extirpation. Otherwise, the current range of the salamander changed little from the known historical range. Thus, we maintained the LPN of 8 for this species.

Salado salamander (*Eurycea chisholmensis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Salado salamander is historically known from two spring sites, Big Boiling Springs and Robertson Springs, near Salado, Bell County, Texas. We have received only one anecdotal report of a salamander sighting in Big Boiling Springs in 2008; prior to that, the salamander had not been sighted there since 1991. Texas Parks and Wildlife Department has been conducting regular surveys at Robertson Springs since June 2009 and has rediscovered the Salado salamander at this site.

Primary threats to this species are habitat modification and degradation of water quality due to expanding urbanization. The Salado salamander depends on a constant supply of clean water from the Northern Segment of the Edwards Aquifer for its survival. Pollutants and contaminants that enter the Edwards Aquifer discharge in salamander habitat and have morphological and physiological effects on the salamander. We do not know how likely spills are to occur within the contributing watersheds of the springs that support this species. However, several groundwater incidents have occurred within Salado salamander habitat in recent years. The salamander is reasonably expected to be vulnerable to catastrophic hazardous materials spills, groundwater contamination from

the Northern Segment of the Edwards Aquifer, and impacts to its surface habitat. In addition, Big Boiling Springs is located near Interstate Highway 35 and in the center of the Village of Salado. Traffic and urbanization is likely to increase the threat of contamination of spills, higher levels of impervious cover, and subsequent impacts to groundwater. These threats significantly affect the survival of this species, and groundwater contamination and impacts to surface habitat are ongoing. Moreover, we do not have information that the magnitude or imminence of the threats to the species has changed since our previous assessment when we concluded there are ongoing, and therefore, imminent threats of a high magnitude. Therefore, we maintained the LPN of 2 for this species.

Yosemite toad (*Bufo canorus*)—The following summary is based on information contained in our files and the petition we received on April 3, 2000. See also our 12-month petition finding published on December 10, 2002 (67 FR 75834). Yosemite toads are moderately sized toads, with females having black spots edged with white or cream that are set against a grey, tan, or brown background. Males have a nearly uniform coloration of yellow-green to olive drab to greenish brown. Yosemite toads are most likely to be found in areas with thick meadow vegetation or patches of low willows near or in water, and use rodent burrows for overwintering and temporary refuge during the summer. Breeding habitat includes the edges of wet meadows, slow-flowing streams, shallow ponds, and shallow areas of lakes. The historical range of Yosemite toads in the Sierra Nevada occurs from the Blue Lakes region north of Ebbetts Pass (Alpine County) to south of Kaiser Pass in the Evolution Lake/Darwin Canyon area (Fresno County). The historical elevational range of Yosemite toads is 1,460 to 3,630 m (4,790 to 11,910 ft).

The threats currently facing the Yosemite toad include cattle grazing, timber harvesting, recreation, disease, and climate change. Inappropriate grazing has been shown to cause loss in vegetative cover and destroys peat layers in meadows, which lowers the groundwater table and summer flows. This may increase the stranding and mortality of tadpoles, or make these areas completely unsuitable for Yosemite toads. Grazing can also degrade or destroy moist upland areas used as non-breeding habitat by Yosemite toads and collapse rodent burrows used by Yosemite toads as cover and hibernation sites. Timber harvesting and associated road development can severely alter the terrestrial environment and result in the reduction and occasional extirpation of amphibian populations in the Sierra Nevada. They also create habitat gaps that may act as dispersal barriers and contribute to the fragmentation of Yosemite toad habitat and populations. Trails (foot, horse, bicycle, or off-highway motor vehicle) compact soil in riparian habitat, which increases erosion, displaces vegetation, and can lower the water table. Trampling or the collapsing of rodent burrows by recreationists, pets, and vehicles could lead to direct mortality of all life stages of the Yosemite toad and disrupt their behavior. Various diseases have been confirmed in Yosemite toads. Mass die-offs of amphibians have been attributed to: chytrid fungal infections of metamorphs and adults; Saprolegnia fungal infections of eggs; iridovirus infection of larvae, metamorphs, or adults; and bacterial infections. Yosemite toads probably are exposed to a variety of pesticides and other chemicals throughout their range. Environmental contaminants could negatively affect the species by causing direct mortality; suppressing the immune system; disrupting breeding behavior, fertilization, growth or development of young; and disrupting the ability to avoid predation.

There is no indication that any of these threats are ongoing or planned and the threats are therefore nonimminent. In addition, since there are a number of substantial populations and these threats tend to have localized effects, the threats are moderate to low in magnitude. In addition, almost all of the species' range occurs on Federal land, which protects the species from private development and facilitates management of the species by Federal agencies. We therefore retained an LPN of 11 for the Yosemite toad.

Black Warrior waterdog (*Necturus alabamensis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Black Warrior waterdog is a salamander that inhabits streams above the Fall Line within the Black Warrior River Basin in Alabama. There is very little specific locality information available on the historical distribution of the Black Warrior waterdog since little attention was given to this species between its description in 1937 and the 1980s. At that time, there were a total of only 11 known historical records from 4 Alabama counties. Two of these sites have now been inundated by impoundments. Extensive survey work was conducted in the 1990s to look for additional populations. As a result of that work, the species was documented at 14 sites in 5 counties.

Water-quality degradation is the biggest threat to the continued existence of the Black Warrior waterdog. Most streams that have been surveyed for the waterdog showed evidence of pollution and many appeared biologically depauperate. Sources of point and nonpoint pollution in the Black Warrior River Basin have been numerous and widespread. Pollution is generated from inadequately treated effluent from industrial plants, sanitary landfills, sewage treatment plants, poultry operations, and cattle feedlots. Surface mining represents another threat to the biological integrity of waterdog habitat. Runoff from old, abandoned coal mines generates pollution through acidification, increased mineralization, and sediment loading. The North River, Locust Fork, and Mulberry Fork, all streams that this species inhabits, are on the Environmental Protection Agency's list of impaired waters. An additional threat to the Black Warrior waterdog is the creation of large impoundments that have flooded thousands of square hectares of its habitat. These impoundments are likely marginal or unsuitable habitat for the salamander. Suitable habitat for the Black Warrior waterdog is limited and available data indicate extant populations are small and their viability is questionable. This situation is pervasive and problematic; water quality issues are persistent and regulatory mechanisms are not ameliorating these threats, though we have no indication of population declines, at present. We hope additional surveys may clarify the status of populations in face of existing threats. Therefore, the overall magnitude of the threat is moderate. Water quality degradation in the Black Warrior basin is ongoing; therefore, the threats are imminent. We assigned an LPN of 8 to this species.

Fishes

Headwater chub (*Gila nigra*)—The following summary is based on information contained in our files, the 12-month finding published in the **Federal Register** on May 3, 2006 (71 FR 26007), and in the petition received November 9, 2009. The headwater chub is a moderate-sized cyprinid fish. The range of the headwater chub has been reduced by approximately 60 percent. Seventeen streams (125 miles (200 kilometers) of stream) are thought to be occupied out of 27 streams (312 miles (500 kilometers) of stream) formerly

occupied in the Gila River Basin in Arizona and New Mexico. All remaining populations are fragmented and isolated and threatened by a combination of factors.

Headwater chub are threatened by introduced nonnative fish that prey on them and compete with them for food. Habitat destruction and modification have occurred and continue to occur as a result of dewatering, impoundment, channelization, and channel changes caused by alteration of riparian vegetation and watershed degradation from mining, grazing, roads, water pollution, urban and suburban development, groundwater pumping, and other human actions. Existing regulatory mechanisms do not appear to be adequate for addressing the impact of nonnative fish and also have not removed or eliminated the threats that continue to be posed through habitat destruction or modification. The fragmented nature and rarity of existing populations makes them vulnerable to other natural or manmade factors, such as drought and wildfire. Climate change is predicted to worsen these threats though increased aridity of the region, thus reducing stream flows and warming aquatic habitats, which makes them more suitable to nonnative species.

The Arizona Game and Fish Department has finalized the Arizona Statewide Conservation Agreement for Roundtail Chub (*G. robusta*), Headwater Chub, Flannelmouth Sucker (*Catostomus latipinnis*), Little Colorado River Sucker (*Catostomus* spp.), Bluehead Sucker (*C. discobolus*), and Zuni Bluehead Sucker (*C. discobolus yarrowi*). The New Mexico Department of Game and Fish recently listed the headwater chub as endangered and created a recovery plan for the species: Colorado River Basin Chubs (Roundtail Chub, Gila Chub (*G. intermedia*), and Headwater Chub) Recovery Plan, which was approved by the New Mexico State Game Commission on November 16, 2006. Both the Arizona Agreement and the New Mexico Recovery Plan recommend preservation and enhancement of extant populations and restoration of historical headwater-chub populations. The recovery and conservation actions prescribed by Arizona and New Mexico plans, which we predict will reduce and remove threats to this species, will require further discussions and authorizations before they can be implemented, although some actions have been completed and several are planned for the immediate future. Although threats are ongoing, existing information indicates long-term persistence and stability of existing populations. Currently 10 of the 17 extant stream populations are considered stable based on abundance and evidence of recruitment. Based on our assessment, threats (nonnative species, habitat loss from land uses) remain imminent and are of a moderate magnitude. Thus, we have retained an LPN of 8 for this species.

Roundtail Chub (*Gila robusta*) Lower Colorado River Distinct Population Segment—The following summary is based on information contained in our files and the 12-month finding published in the **Federal Register** on July 7, 2009 (74 FR 32352). The roundtail chub is a moderate to large cyprinid fish. The range of the roundtail chub has been reduced by approximately 68 to 82 percent. Thirty-three streams are currently occupied, representing approximately 18 to 32 percent of the species' former range, or 800 km (500 miles) to 1350 km (840 mi) of 3050 km (1895 mi) of formerly occupied streams in the Gila River Basin in Arizona and New Mexico. Most of the remaining populations are fragmented and isolated, and all are threatened by a combination of factors.

Roundtail chub are threatened by introduced nonnative fish that prey on them and compete with them for food. Habitat destruction and modification have occurred and continue to occur as a result of dewatering, impoundment, channelization, and channel changes caused by alteration of riparian vegetation and watershed degradation from mining, grazing, roads, water pollution, urban and suburban development, groundwater pumping, and other human actions. Existing regulatory mechanisms do not appear to be adequate for addressing the impact of nonnative fish and also have not removed or eliminated the threats that continue to be posed through habitat destruction or modification. The fragmented nature and rarity of existing populations makes them vulnerable to other natural or manmade factors, such as drought and wildfire. Climate change is predicted to worsen these threats though increased aridity of the region, thus reducing stream flows and warming aquatic habitats, which makes them more suitable to nonnative species.

The Arizona Game and Fish Department has finalized the Arizona Statewide Conservation Agreement for Roundtail Chub, Headwater Chub (*G. nigra*), Flannelmouth Sucker (*Catostomus latipinnis*), Little Colorado River Sucker (*Catostomus* spp.), Bluehead Sucker (*C. discobolus*), and Zuni Bluehead Sucker (*C. discobolus yarrowi*). The New Mexico Department of Game and Fish lists the roundtail chub as endangered and has created a recovery plan for the species: Colorado River Basin Chubs (Roundtail Chub, Gila Chub (*G. intermedia*), and Headwater Chub) Recovery Plan, which was approved by the New Mexico State Game Commission on November 16, 2006. Both the Arizona Agreement and the New Mexico Recovery Plan recommend preservation and enhancement of extant populations and restoration of historical roundtail-chub populations. The recovery and conservation actions prescribed by Arizona and New Mexico plans, which we predict will reduce and remove threats to this species, will require further discussions and authorizations before they can be implemented, although some actions have been completed and several are planned for the immediate future. Although threats are ongoing, existing information indicates long-term persistence and stability of existing populations. Currently 9 of the 33 extant stream populations are considered stable based on abundance and evidence of recruitment. Based on our assessment, threats (nonnative species, habitat loss from land uses) remain imminent and are of a moderate magnitude. Thus, we have retained an LPN of 9 for this distinct population segment.

Arkansas darter (*Etheostoma cragini*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This fish species occurs in Arkansas, Colorado, Kansas, Missouri, and Oklahoma. The species is found most often in sand- or pebble-bottomed pools of small, spring-fed streams and marshes, with cool water and broad-leaved aquatic vegetation. Its current distribution is indicative of a species that once was widely dispersed throughout its range, but has been relegated to isolated areas surrounded by unsuitable habitat that prevents dispersal. Factors influencing the current distribution include: Surface and groundwater irrigation resulting in decreased flows or stream dewatering; the dewatering of long reaches of riverine habitat necessary for species movement when surface flows do occur; conversion of prairie to cropland which influences groundwater recharge and spring flows; water quality degradation from a variety of sources; and the construction of dams which act as barriers preventing emigration upstream and downstream through the reservoir pool. The magnitude of threats facing

this species is moderate to low, given the number of different locations where the species occurs and the fact that no single threat or combination of threats affects more than a portion of the widespread population occurrences. Overall, the threats are nonimminent since groundwater pumping is declining and development, spills, and runoff are not currently affecting the species rangewide. Thus, we are retaining an LPN of 11 for the Arkansas darter.

Pearl darter (*Percina aurora*)—The following summary is based on information contained in our files. Little is known about the specific habitat requirements or natural history of the Pearl darter, a small fish in the Percidae family. Pearl darters have been collected from a variety of river/stream attributes, mainly over gravel bottom substrate. This species is historically known only from localized sites within the Pascagoula and Pearl River drainages in two states. Currently, the Pearl darter is considered extirpated from the Pearl River drainage and rare in the Pascagoula River drainage. Since 1983, the range of the Pearl darter has decreased by 55 percent.

The Pearl darter is vulnerable to non-point-source pollution caused by urbanization and other land use activities; gravel mining and resultant changes in river geomorphology, especially head cutting; and the possibility of water quantity decline from the proposed Department of Energy Strategic Petroleum Reserve project and a proposed dam on the Bouie River. Additional threats are posed by the apparent lack of adequate State and Federal water quality regulations due to the continuing degradation of water quality within the species' habitat. The Pearl darter's localized distribution and apparent low population numbers may indicate a species with lower genetic diversity which would also make this species more vulnerable to catastrophic events. Threats affecting the Pearl darter are localized in nature, affecting portions of the population within the drainage, thus, we assigned a threat magnitude of moderate to low for this species. In addition, the threats are imminent since the identified threats are currently impacting this species in some portions of its range. Therefore, we have assigned a listing priority number of 8 for this species.

Grotto sculpin (*Cottus* sp., sp. nov.)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Grotto sculpin, a small fish, is restricted to two karst areas (limestone regions characterized by sink holes, abrupt ridges, caves, and underground streams), the Central Perryville Karst and Mystery-Rimstone Karst in Perry County, southeast Missouri. Grotto sculpins have been documented in only five cave systems (Burr et al. 2001, p. 284). The current overall range of the grotto sculpin has been estimated to encompass approximately 260 square kilometers (100 square miles).

The small population size and endemism of the grotto sculpin make it vulnerable to extinction due to genetic drift, inbreeding depression, and random or chance changes to the environment (Smith 1974, p. 350). The species' karst habitat is located down-gradient of the city of Perryville, Missouri, which poses a potential threat if contaminants from this urban area enter cave streams occupied by grotto sculpins. Various agricultural chemicals, such as ammonia, nitrite/nitrate, acetochlor, dieldrin, and atrazine have been detected at levels high enough to be detrimental to aquatic life within the Perryville Karst area. Many of the sinkholes in Perry County contain anthropogenic refuse, ranging from household cleansers and sewage to used pesticide and herbicide containers. As a result, potential water contamination from various sources of point and non-point pollution poses a significant threat to the grotto sculpin. Of the five cave systems documented to have grotto sculpins, populations in two cave systems have had fish kills in recent times. Predatory fish such as common carp, fat-head minnow, yellow bullhead, green sunfish, bluegill, and channel catfish occur in all of the caves occupied by grotto sculpin. These potential predators may escape surface farm ponds that unexpectedly drain through sinkholes into the underground cave systems and enter Grotto sculpin habitat. No regulatory mechanisms are in place that would provide protection to the grotto sculpin. Current threats to the habitat of the grotto sculpin may exacerbate potential problems associated with its low population numbers and increase the likelihood of extinction. Due to the high magnitude of ongoing, and thus imminent, threats we assigned this species an LPN of 2.

Sharpnose shiner (*Notropis oxyrhynchus*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The sharpnose shiner is a small, slender minnow, endemic to the Brazos River Basin in Texas. Historically, the sharpnose shiner existed throughout the Brazos River and several of its major tributaries. It has also been found in the Wichita River (within the Red River Basin), where it may have once naturally occurred but has since been extirpated. Current information indicates that the population upstream of Possum Kingdom Reservoir is apparently stable, while the population downstream of the reservoir may be extirpated, representing a reduction of approximately 69 percent of its historical range.

The most significant threat to the existence of the sharpnose shiner is potential reservoir development within its current range. The current water plan for Texas provides several reservoir options that could be implemented within the Brazos River drainage. Additional threats include irrigation and water diversion, sedimentation, desalination, industrial and municipal discharges, agricultural activities, in-stream sand and gravel mining, and the spread of invasive saltcedar. The current limited distribution of the sharpnose shiner within the Upper Brazos River Basin makes it vulnerable to catastrophic events such as the introduction of competitive species or prolonged drought. State law does not provide protection for the sharpnose shiner. The magnitude of threat is considered high since reservoir development within the species' current range may render remaining habitat unsuitable. The threats are nonimminent because the most significant threat—major reservoir projects—is not likely to occur in the near future, and there is potential for implementing other water-supply options that could preclude reservoir development. For these reasons, we assigned an LPN of 5 to this species.

Smalleye shiner (*Notropis buccula*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The smalleye shiner is a small, pallid minnow endemic to the Brazos River Basin in Texas. The population of smalleye shiners within the Upper Brazos River drainage (upstream of Possum Kingdom Reservoir) is apparently stable. However, the shiner may be extirpated downstream from the reservoir, representing a reduction of approximately 54 percent of its historical range.

The most significant threat to the existence of the smalleye shiner is potential reservoir development within its current range. The current water plan for Texas provides several reservoir options that could be implemented within the Brazos River drainage. Additional threats include irrigation

and water diversion, sedimentation, desalination, industrial and municipal discharges, agricultural activities, in-stream sand and gravel mining, and the spread of invasive saltcedar. The current limited distribution of the smalleye shiner within the Upper Brazos River drainage makes it vulnerable to catastrophic events such as the introduction of competitive species or prolonged drought. State law does not provide protection for the smalleye shiner. The magnitude of threat is high since the major threat of reservoir development within the species' current range may render its remaining habitat unsuitable. The threats are nonimminent because major reservoir projects are not likely to occur in the near future and there is potential for implementing other water-supply options that could preclude reservoir development. For these reasons, we assigned a LPN of 5 to this species.

Zuni bluehead sucker (*Catostomus discobolus yarrowi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Zuni bluehead sucker is a colorful fish less than 8 inches long. The range of the Zuni bluehead sucker has been reduced by over 95 percent. The Zuni bluehead sucker currently occupies 3 river miles (4.8 kilometers) in three headwater streams of the Rio Nutria in New Mexico, and potentially occurs in 27.5 miles in (44 kilometers) the Kinlichee drainage of Arizona. However, the number of occupied miles in Arizona is unknown and the genetic composition of these fish is still under investigation.

Zuni bluehead sucker range reduction and fragmentation is caused by discontinuous surface-water flow, introduced species, and habitat degradation from fine sediment deposition. Zuni bluehead sucker persist in very small creeks that are subject to very low flows and drying during periods of drought. Because of climate change (warmer air temperatures), stream flow is predicted to decrease in the Southwest, even if precipitation were to increase moderately. Warmer winter and spring temperatures cause an increased fraction of precipitation to fall as rain, resulting in a reduced snow pack, an earlier snow melt, and a longer dry season leading to decreased stream flow in the summer and a longer fire season. These changes would have a negative effect on Zuni bluehead sucker. Another major impact to populations of Zuni bluehead sucker was the application of fish toxicants through at least two dozen treatments in the Nutria and Pescado rivers between 1960 and 1975. Large numbers of Zuni bluehead suckers were killed during these treatments. The Zuni bluehead sucker is most likely extirpated from Rio Pescado as none have been collected from that river since 1993.

The New Mexico Department of Game and Fish developed a recovery plan for Zuni bluehead sucker which was approved by the New Mexico State Game Commission on December 15, 2004. The recovery plan recommends preservation and enhancement of extant populations and restoration of historical Zuni bluehead sucker populations. We predict that the recovery actions prescribed by the recovery plan will reduce and remove threats to this subspecies, but they will require further discussions and authorizations before they can be implemented and threats are reduced. Because of the ongoing threats of high magnitude, including loss of habitat (historical and current from beaver activity), degradation of remaining habitat (nonnative species and land development), drought, fire, and climate change, we maintained an LPN of 3 for this subspecies.

Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*)—The following summary is based on information contained in our files and our status review published on May 14, 2008 (73 FR 27900). Rio Grande cutthroat trout is one of 14 subspecies of cutthroat trout found in the western United States. Populations of this subspecies are in New Mexico and Colorado in drainages of the Rio Grande, Pecos, and Canadian Rivers. Although once widely distributed in connected stream networks, Rio Grande cutthroat trout populations now occupy about 10 percent of historical habitat, and the populations are fragmented and isolated from one another. The majority of populations occur in high elevation streams.

Major threats include the loss of suitable habitat that has occurred and is likely to continue occurring due to water diversions, dams, stream drying, habitat quality degradation, and changes in hydrology, introduction of nonnative trout and ensuing competition, predation, and hybridization, and whirling disease. In addition, average air temperatures in the southwest have increased about 1 °C (2.5 °F) in the past 30 years, and they are projected to increase by another 1.2 to 2.8 °C (3 to 7 °F) by 2050. Because trout require cold water, and water temperatures depend in large part on air temperature, there is concern that the habitat of Rio Grande cutthroat trout will further decrease in response to warmer water temperatures caused by climate change. Wildfire and drought (stream drying) are additional threats to Rio Grande cutthroat trout populations that are likely to increase in magnitude in response to climate change. Research is occurring to assess the effects of climate change on this subspecies, and agencies are working to restore historically occupied streams. The threats are of moderate magnitude because there is good distribution and a comparatively large number of populations across the landscape, some populations have few threats present, and in other areas management actions are being taken to help control the threat of nonnative trout. Overall, the threats are ongoing and, therefore, imminent. Based on imminent threats of moderate magnitude, we assigned an LPN of 9 to this subspecies.

Clams

Texas hornshell (*Popenaias popei*)—The following summary is based on information contained in our files and information provided by the New Mexico Department of Game and Fish and Texas Parks and Wildlife Department. No new information was provided in the petition received on May 11, 2004. The Texas hornshell is a freshwater mussel found in the Black River in New Mexico, and the Rio Grande and the Devils River in Texas. Until March 2008, the only known extant populations were in New Mexico's Black River and one locality in the Rio Grande near Laredo, Texas. In March 2008, two new localities were confirmed in Texas—one in the Devils River and one in the mainstem Rio Grande in the Rio Grande Wild and Scenic River segment downstream of Big Bend National Park.

The primary threats to this species are habitat alterations such as stream bank channelization, impoundments, and diversions for agriculture and flood control; contamination of water by oil and gas activity; alterations in the natural riverine hydrology; and increased sedimentation and flood pulses from prolonged overgrazing and loss of native vegetation. Although riverine habitats throughout the species' known occupied range are under constant threat from these ongoing or potential activities, numerous conservation actions that will benefit the species are under way in New Mexico, including the completion of a State recovery plan for the species and the drafting of a Candidate Conservation Agreement with Assurances, and are beginning in Texas on the Big Bend reach of the Rio Grande. Due to these ongoing conservation efforts, the

magnitude of the threats is moderate. However, the threats to the species are ongoing, and remain imminent. Thus, we maintained the LPN of 8 for this species.

Fluted kidneyshell (*Ptychobranchus subtentum*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The fluted kidneyshell is a freshwater mussel (Unionidae) endemic to the Cumberland and Tennessee River systems (Cumberlandian Region) in Alabama, Kentucky, Tennessee, and Virginia. It requires shoal habitats in free-flowing rivers to survive and successfully recruit new individuals into its populations.

This species has been extirpated from numerous regional streams and is no longer found in the State of Alabama. Habitat destruction and alteration (*e.g.,* impoundments, sedimentation, and pollutants) are the chief factors that contributed to its decline. The fluted kidneyshell was historically known from at least 37 streams but is currently restricted to no more than 12 isolated populations. Current status information for most of the 12 populations deemed to be extant is available from recent periodic sampling efforts (sometimes annually) and other field studies, particularly in the upper Tennessee River system. Some populations in the Cumberland River system have had recent surveys as well (*e.g.,* Wolf, Little Rivers; Little South Fork; Horse Lick, Buck Creeks). Populations in Buck Creek, Little South Fork, Horse Lick Creek, Powell River, and North Fork Holston River have clearly declined over the past two decades. Based on recent information, the overall population of the fluted kidneyshell is declining rangewide. At this time, the species remains in large numbers and is viable in just the Clinch River/Copper Creek, although smaller, viable populations remain (*e.g.,* Wolf, Little, North Fork Holston Rivers; Rock Creek). Most other populations are of questionable or limited viability, with some on the verge of extirpation (*e.g.,* Powell River; Little South Fork; Horse Lick, Buck, Indian Creeks). We hope that newly reintroduced populations in the Little Tennessee, Nolichucky, and Duck Rivers will begin to reverse the downward population trend of this species. The threats are high in magnitude, since the majority of populations of this species are severely affected by numerous threats (impoundments, sedimentation, small population size, isolation of populations, gravel mining, municipal pollutants, agricultural runoff, nutrient enrichment, and coal processing pollution) which result in mortality or reduced reproductive output. Since the threats are ongoing, they are imminent. We assigned an LPN of 2 to this mussel species.

Neosho mucket (*Lampsilis rafinesqueana*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Neosho mucket is a freshwater mussel native to Arkansas, Kansas, Missouri, and Oklahoma. The species has been extirpated from approximately 62 percent (835 river miles (1,334 river kilometers)) of its range. Most of this decline has occurred in Kansas and Oklahoma. The Neosho mucket survives in four river drainages; however, only one of these, the Spring River, currently supports a relatively large population.

Significant portions of the historic range have been inundated by the construction of at least 11 dams. Channel instability downstream of these dams has further reduced suitable habitat and mussel distribution. Range restriction and population declines have occurred due to habitat degradation attributed to urbanization, impoundments, mining, sedimentation, and agricultural pollutants. Rapid development and urbanization in the Illinois River watershed will likely continue to increase channel instability, sedimentation, and eutrophication. The recent rapid decline of the entire mussel community in the Arkansas portion of the Illinois River, including Neosho mucket, is alarming, and it is possible the species will be extirpated from approximately 30 river miles (48 river kilometers) in the very near future. The Illinois River once represented one of the two viable populations, but continued viability of this stream population is doubtful and extirpation is imminent. The remaining extant populations are vulnerable to random catastrophic events (*e.g.,* flood scour, drought, toxic spills), land use changes within the limited range, and genetic isolation and the deleterious effects of inbreeding. These threats have led to the species being intrinsically vulnerable to extirpation. Although state regulations limit harvest of this species, there is little protection for habitat. The threats are high in magnitude as they occur throughout the range of this species, and the majority of these threats are ongoing and imminent. Thus, we assigned a listing priority number of 2 to this species.

Alabama pearlshell (*Margaritifera marrianae*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Slabside pearlymussel (*Lexingtonia dolabelloides*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The slabside pearlymussel is a freshwater mussel (Unionidae) endemic to the Cumberland and Tennessee River systems (Cumberlandian Region) in Alabama, Kentucky, Tennessee, and Virginia. It requires shoal habitats in free-flowing rivers to survive and successfully recruit new individuals into its populations.

Habitat destruction and alteration (*e.g.,* impoundments, sedimentation, and pollutants) are the chief factors contributing to the decline of this species, which has been extirpated from numerous regional streams and is no longer found in Kentucky. The slabside pearlymussel was historically known from at least 32 streams, but is currently restricted to no more than 10 isolated stream segments. Current status information for most of the 10 populations deemed to be extant is available from recent periodic sampling efforts (sometimes annually) and other field studies. Comprehensive surveys have taken place in the Middle and North Forks Holston River, Paint Rock River, and Duck River in the past several years. Based on recent information, the overall population of the slabside pearlymussel is declining rangewide. Of the five streams in which the species remains in good numbers (*e.g.,* Clinch, North and Middle Forks Holston, Paint Rock, Duck Rivers), the Middle and upper North Fork Holston Rivers have undergone drastic recent declines, while the Clinch population has been in a longer-term decline. Most of the remaining five populations (*e.g.,* Powell River, Big Moccasin Creek, Hiwassee River, Elk River, Bear Creek) have doubtful viability, and several if not all of them may be on the verge of extirpation.

The threats remain high in magnitude, since all populations of this species are severely affected in numerous ways (impoundments, sedimentation, small population size, isolation of populations, gravel mining, municipal pollutants, agricultural runoff, nutrient enrichment, and coal processing pollution) which result in mortality or reduced reproductive output leading to a relatively high likelihood of extinction. We assigned an LPN of 2 to this mussel species.

Snails

Phantom Cave snail (*Cochliopa texana*) and Phantom springsnail (*Tryonia cheatumi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Phantom Cave snail and Phantom springsnail are small aquatic snails that occur in three spring outflows in the Toyah Basin in Reeves and Jeff Davis Counties, Texas.

The primary threat to both species is the loss of surface flows due to declining groundwater levels from drought, pumping for agricultural production, and potentially climate change. Much of the land immediately surrounding their spring habitat is owned and managed by The Nature Conservancy, Bureau of Reclamation, and Texas Parks and Wildlife Department. However, the water needed to maintain their habitat has declined due to a reduction in spring flows, possibly as a result of private groundwater pumping in areas beyond that controlled by these landowners. As an example, Phantom Lake Spring, one of the sites of occurrence, has already ceased flowing and aquatic habitat is artificially supported only by a pumping system. The magnitude of the threats is high because spring flow loss would result in complete habitat destruction and permanent elimination of all populations of the species. The immediacy of the threats is imminent, as evidenced by the drastic decline in spring flow at Phantom Lake Spring that is currently happening and may extirpate these populations in the near future. Declining spring flows in San Solomon Spring are also becoming evident and will affect that spring site as well within the foreseeable future. Thus, we maintained the LPN of 2 for both species.

Sisi snail (*Ostodes strigatus*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The sisi snail is a ground-dwelling species in the Potaridae family, and is endemic to American Samoa. The species is now known from a single population on the island of Tutuila, American Samoa.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory snails. The decline of the sisi in American Samoa has resulted, in part, from loss of habitat to forestry and agriculture and loss of forest structure to hurricanes and alien weeds that establish after these storms. All live sisi snails have been found in the leaf litter beneath remaining intact forest canopy. No snails were found in areas bordering agricultural plots or in forest areas that were severely damaged by three hurricanes (1987, 1990, and 1991). Under natural historical conditions, loss of forest canopy to storms did not pose a great threat to the long-term survival of these snails; enough intact forest with healthy populations of snails would support dispersal back into newly regrown canopy forest. However, the presence of alien weeds such as mile-a-minute vine (*Mikania micrantha*) may reduce the likelihood that native forest will re-establish in areas damaged by the hurricanes. This loss of habitat to storms is greatly exacerbated by expanding agriculture. Agricultural plots on Tutuila have spread from low elevation up to middle and some high elevations, greatly reducing the forest area and thus reducing the resilience of native forests and its populations of native snails. These reductions also increase the likelihood that future storms will lead to the extinction of populations or species that rely on the remaining canopy forest. In an effort to eradicate the giant African snail (*Achatina fulica*), the alien rosy carnivore snail (*Euglandia rosea*) was introduced in 1980. The rosy carnivore snail has spread throughout the main island of Tutuila. Numerous studies show that the rosy carnivore snail feeds on endemic island snails including the sisi, and is a major agent in their declines and extirpations. At present, the major threat to long-term survival of the native snail fauna in American Samoa is predation by nonnative predatory snails. These threats are ongoing and are therefore imminent. Since the threats occur throughout the entire range of the species, have a severe effect on the survival of the snails, leading to a relatively high likelihood of extinction, they are of a high magnitude. Therefore we assigned this species an LPN of 2.

Diamond Y Spring snail (*Pseudotryonia adamantina*) and Gonzales springsnail (*Tryonia circumstriata*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Diamond Y Spring snail and Gonzales springsnail are small aquatic snails endemic to Diamond Y Spring in Pecos County, Texas. The land surrounding the spring and its outflow channels are owned and managed by The Nature Conservancy.

These snails are primarily threatened with habitat loss due to springflow declines from drought, pumping of groundwater, and potentially of climate change. Additional threats include water contamination from accidental releases of petroleum products, as their habitat is in an active oil and gas field. Also, a nonnative aquatic snail (*Melanoides* sp.) was introduced into the native snails' habitat and may compete with endemic snails for space and resources. The magnitude of threats is high because limited distribution of these narrow endemics makes any impact from increasing threats (*e.g.,* loss of springflow, contaminants, and nonnative species) likely to result in the extinction of the species. These species occur in one location in an arid region currently plagued by drought and ongoing aquifer withdrawals, making the eventual loss of spring flow an imminent threat of total habitat loss. Thus, we maintained the LPN of 2 for both species.

Fragile tree snail (*Samoana fragilis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. A tree-dwelling species, the fragile tree snail is a member of the Partulidae family of snails, and is endemic to the islands of Guam and Rota (Mariana Islands). Requiring cool and shaded native forest habitat, the species is now known from one population on Guam and from one population on Rota.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory snails and flatworms. Large numbers of Philippine deer (*Cervus mariannus*) (Guam and Rota), pigs (*Sus scrofra*) (Guam), water buffalo (*Bubalus bubalis*) (Guam), and cattle (*Bos taurus*) (Rota) directly alter the understory plant community and overall forest microclimate, making it unsuitable for snails. Predation by the alien rosy carnivore snail (*Euglandina rosea*) and the Manokwar flatworm (*Platydemus manokwari*) is a serious threat to the survival of the fragile tree snail. Field observations have established that the rosy carnivore snail and the Manokwar flatworm will readily feed on native Pacific island tree snails, including the Partulidae, such as those of the Mariana Islands. The rosy carnivore snail has caused the extirpation of many populations and species of native snails throughout the Pacific islands. The Manokwar flatworm has also contributed to the decline of native tree snails, in part due to its ability to ascend into trees and bushes that support native snails. Areas with populations of the flatworm usually lack partulid tree snails or have declining numbers of

snails. Because all of the threats occur rangewide, have a significant effect on the survival of this snail species, leading to a relatively high likelihood of extinction, they are high in magnitude. The threats are also ongoing and thus are imminent. Therefore, we assigned this species an LPN of 2.

Guam tree snail (*Partula radiolata*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. A tree-dwelling species, the Guam tree snail is a member of the Partulidae family of snails and is endemic to the island of Guam. Requiring cool and shaded native forest habitat, the species is now known from 22 populations on Guam.

This species is primarily threatened by predation from nonnative predatory snails and flatworms. In addition, the species is also threatened by habitat loss and degradation. Predation by the alien rosy carnivore snail (*Euglandina rosea*) and the alien Manokwar flatworm (*Platydemus manokwari*) is a serious threat to the survival of the Guam tree snail (see summary for the fragile tree snail, above). On Guam, open agricultural fields and other areas prone to erosion were seeded with tangantangan (*Leucaena leucocephala*) by the U.S. Military. Tangantangan grows as a single species stand with no substantial understory. The microclimatic condition is dry with little accumulation of leaf litter humus and is particularly unsuitable as Guam tree snail habitat. In addition, native forest cannot reestablish and grow where this alien weed has become established. Because all of the threats occur rangewide, have a significant effect on the survival of this snail species, leading to a relatively high likelihood of extinction, they are high in magnitude. The threats are also ongoing and thus are imminent. Therefore, we assigned this species an LPN of 2.

Humped tree snail (*Partula gibba*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. A tree-dwelling species, the humped tree snail is a member of the Partulidae family of snails, and was originally known from the island of Guam and the Commonwealth of the Northern Mariana Islands (islands of Rota, Aguiguan, Tinian, Saipan, Anatahan, Sarigan, Alamagan, and Pagan). Most recent surveys revealed a total of 13 populations on the islands of Guam, Rota, Aguiguan, Sarigan, Saipan, Alamagan, and Pagan. Although still the most widely distributed tree snail endemic in the Mariana Islands, remaining population sizes are often small.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory snails and flat worms. Throughout the Mariana Islands, feral ungulates (pigs (*Sus scrofa*), Philippine deer (*Cervus mariannus*), cattle (*Bos taurus*), water buffalo (*Bubalus bubalis*), and goats (*Capra hircus*)) have caused severe damage to native forest vegetation by browsing directly on plants, causing erosion, and retarding forest growth and regeneration. This in turn reduces the quantity and quality of forested habitat for the humped tree snail. Currently, populations of feral ungulates are found on the islands of Guam (deer, pigs, and water buffalo), Rota (deer and cattle), Aguiguan (goats), Saipan (deer, pigs, and cattle), Alamagan (goats, pigs, and cattle), and Pagan (cattle, goats, and pigs). Goats were eradicated from Sarigan in 1998 and the humped tree snail has increased in abundance on that island, likely in response to the removal of all the goats. However, the population of humped tree snails on Anatahan is likely extirpated due to the massive volcanic explosions of the island beginning in 2003 and still continuing, and the resulting loss of up to 95 percent of the vegetation on the island. Predation by the alien rosy carnivore snail (*Euglandina rosea*) and the alien Manokwar flatworm (*Platydemus manokwari*) is a serious threat to the survival of the humped tree snail (see summary for the fragile tree snail, above). The magnitude of threats is high because these alien predators cause significant population declines to the humped tree snail rangewide. These threats are ongoing and thus are imminent. Therefore, we assigned this species an LPN of 2.

Lanai tree snail (*Partulina semicarinata*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted petition 12-month finding.

Lanai tree snail (*Partulina variabilis*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted petition 12-month finding.

Langford's tree snail (*Partula langfordi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. A tree-dwelling species, Langford's tree snail is a member of the Partulidae family of snails, and is known from one population on the island of Aguiguan.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory snails. In the 1930s, the island of Aguiguan was mostly cleared of native forest to support sugar cane and pineapple production. The abandoned fields and airstrip are now overgrown with alien weeds. The remaining native forest understory has greatly suffered from large and uncontrolled populations of alien goats and the invasion of weeds. Goats (*Capra hircus*) have caused severe damage to native forest vegetation by browsing directly on plants, causing erosion, and retarding forest growth and regeneration. This in turn reduces the quantity and quality of forested habitat for Langford's tree snail. Predation by the alien rosy carnivore snail (*Euglandina rosea*) and by the Manokwar flatworm (*Platydemus manokwari*) (see summary for the fragile tree snail, above) is also a serious threat to the survival of Langford's tree snail. All of the threats are occurring rangewide and no efforts to control or eradicate the nonnative predatory snail species or to reduce habitat loss are being undertaken. The magnitude of threats is high because they result in direct mortality or significant population declines to Langford's tree snail rangewide. A survey of Aguiguan in November 2006 failed to find any live Langford's tree snails. These threats are also ongoing and thus are imminent. Therefore, we assigned this species an LPN of 2.

Newcomb's tree snail (*Newcombia cumingi*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted petition 12-month finding.

Tutuila tree snail (*Eua zebrina*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. A tree-dwelling species, the Tutuila tree snail is a member of the Partulidae family of snails, and is endemic to American Samoa. The species is known from 32 populations on the islands of Tutuila, Nuusetoga, and Ofu.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory

snails and rats. All live Tutuila tree snails were found on understory vegetation beneath remaining intact forest canopy. No snails were found in areas bordering agricultural plots or in forest areas that were severely damaged by three hurricanes (1987, 1990, and 1991). (See summary for the sisi snail, above, regarding impacts of alien weeds and of the rosy carnivore snail.) Rats (*Rattus* spp) have also been shown to devastate snail populations, and rat-chewed snail shells have been found at sites where the Tutuila snail occurs. At present, the major threat to the long-term survival of the native snail fauna in American Samoa is predation by nonnative predatory snails and rats. The magnitude of threats is high because they result in direct mortality or significant population declines to the Tutuila tree snail rangewide. The threats are also ongoing and thus are imminent. Therefore, we assigned this species an LPN of 2.

Chupadera springsnail (*Pyrgulopsis chupaderae*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted petition 12-month finding.

Elongate mud meadows springsnail (*Pyrgulopsis notidicola*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Pyrgulopsis notidicola* is endemic to Soldier Meadow, which is located at the northern extreme of the western arm of the Black Rock Desert in the transition zone between the Basin and Range Physiographic Province and the Columbia Plateau Province, Humboldt County, Nevada. The type locality, and the only known location of the species, occurs in four separate stretches of thermal (between 45° and 32° Celsius, 113° and 90° Fahrenheit) aquatic habitat. The first stretch is the largest at approximately 600 m (1,968 ft) long and 2 m (6.7 ft) wide. The other stretches where *P. notidicola* occurs are less than 6 m (19.7 ft) long and 0.5 m (1.6 ft) wide. *Pyrgulopsis notidicola* occurs only in shallow, flowing water on gravel substrate. The species does not occur in deep water (*i.e.,* impoundments) where water velocity is low, gravel substrate is absent, and sediment levels are high.

The species and its habitat are threatened by recreational use in the areas where it occurs as well as the ongoing impacts of past water diversions and livestock grazing and current off-highway vehicle travel. Conservation measures implemented by the Bureau of Land Management include the installation of fencing to exclude livestock, wild horses, burros and other large mammals; closing of access roads to spring, riparian, and wetland areas and the limiting of vehicles to designated routes; the establishment of a designated campground away from the habitats of sensitive species; the installation of educational signage; and, increased staff presence, including law enforcement and a volunteer site steward during the 6-month period of peak visitor use. These conservation measures have reduced the magnitude of threat to the species to moderate to low; all remaining threats are nonimminent and involve long-term changes to the habitat for the species resulting from past impacts. Until a monitoring program is in place that allows us to assess the long-term trend of the species, we have assigned an LPN of 11.

Gila springsnail (*Pyrgulopsis gilae*)—The following summary is based on information contained in our files and the petition we received on November 20, 1985. Also see our 12-month petition finding published in the **Federal Register** on October 4, 1988 (53 FR 38969). The Gila springsnail is an aquatic species known from 13 populations in New Mexico. Surveys conducted in 2008 and 2009 located 14 additional populations bringing the total known to 27. Given the new population information, as well as new information on threats, we are currently assessing the status of this species.

The long-term persistence of the Gila springsnail is contingent upon protection of the riparian corridor and maintenance of flow to ensure continuous, oxygenated flowing water within the species' required thermal range. Occupied Gila springsnail localities on Federal lands surveyed in 2008 and 2009 are subject to light levels of recreational use only at the thermal springs, and overall, recreational activities do not appear to be affecting springsnail populations. The level of recreational impacts at thermal springs on private lands is unknown. Sites visited in 2008 were excluded from grazing. Although elk use at some of the springs was evident, the level of impact was low. Of greatest concern are the very small size of the isolated occupied habitats and the potential effects of climate change. Although the effect climate change will have on the springs of the Southwest is unpredictable, mean annual temperature in New Mexico has increased by 0.6 degrees per decade since 1970. Higher temperatures lead to higher evaporation rates, increased evapotranspiration, and decreased soil moisture which may reduce the amount of groundwater recharge. Widespread, long-term drought could affect spring flow quantity and quality, negatively affecting the springsnail populations. Based on these nonimminent threats that are currently of a low magnitude, we retained a listing priority number of 11 for this species.

Gonzales springsnail (*Tryonia circumstriata*)—See summary above under Diamond Y Spring snail (*Pseudotryonia adamantina*).

Huachuca springsnail (*Pyrgulopsis thompsoni*)—The following is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Huachuca springsnail inhabits approximately 16 springs and cienegas at elevations of 4,500 to 7,200 feet in southeastern Arizona (14 sites) and adjacent portions of Sonora, Mexico (2 sites). The springsnail is typically found in the shallower areas of springs or cienegas, often in rocky seeps at the spring source. Ongoing threats include habitat modification and destruction through catastrophic wildfire; drought; streamflow alteration; and, potentially, grazing, recreation, military activities, and timber harvest. Overall, the threats are moderate in magnitude because threats are not occurring throughout the range of the species uniformly and not all populations would likely be affected simultaneously by any of the known threats. In addition, multiple landowners (U.S. Forest Service, Fort Huachuca, and The Nature Conservancy) are including consideration for the springsnail or other co-occurring listed species in their activities (reducing fuel loads, avoiding occupied sites during military operations). The threats are ongoing and, thus, imminent. Therefore, we have assigned an LPN of 8 to this species.

New Mexico springsnail (*Pyrgulopsis thermalis*)—The following summary is based on information contained in our files and the petition received on November 20, 1985. Also see our 12-month petition finding published on October 4, 1988 (53 FR 38969). In addition, we have received new information on populations and threats to the species, which we are currently assessing. The New Mexico springsnail is an aquatic species known from twelve separate populations associated with a series of spring-brook systems along the Gila River in the Gila National Forest in Grant County, New Mexico.

The long-term persistence of the New Mexico springsnail is contingent upon protection of the riparian corridor immediately adjacent to springhead and

springrun habitats. Although the New Mexico springsnail populations may be stable, the sites inhabited by the species are subject to levels of recreational use and livestock grazing that can negatively affect this species. If these uses remain at the current or lower levels, they will not pose an imminent threat to the species. Of greater concern is drought, which could affect spring discharge and increases the potential for fire. Although the effect global climate change may have on streams and forests of the Southwest is unpredictable, mean annual temperature in New Mexico has increased by 0.6 degrees per decade since 1970. Higher temperatures lead to higher evaporation rates which may reduce the amount of runoff and groundwater recharge. Increased temperatures may also increase the extent of area influenced by drought and fire. Large fires have occurred in the Gila National Forest and subsequent floods and ash flows have severely affected aquatic life in streams. If the drought continues or worsens, the imminence of threats from decreased discharge and fire will increase. Based on these nonimminent threats of a low magnitude, we retain an LPN of 11 for this springsnail.

Page springsnail (*Pyrgulopsis morrisoni*)—See above in "*Listing Priority Changes in Candidates*." The above summary is based on information contained in our files.

Phantom springsnail (*Tyronia cheatumi*)—See summary above under Phantom Cave snail (*Cochliopa texana*).

Three Forks springsnail (*Pyrgulopsis trivialis*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted petition 12-month finding.

Insects

Wekiu bug (*Nysius wekiuicola*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The wekiu bug belongs to the true bug family, Lygaeidae, and is endemic to the island of Hawaii. This species only occurs on the summit of Mauna Kea and feeds upon other insect species which are blown to the summit of this large volcano. The wekiu bug is primarily threatened by the loss of its habitat from astronomy development. In 2004 and early 2005, surveys found multiple new locations of the wekiu bug on cinder cones on the Mauna Kea summit. Several of these cinder cones within the Mauna Kea Science Reserve, as well as two cinder cones located in the State Ice Age Natural Area Reserve, are not currently undergoing development nor are they the site of any planned development. Thus, the threats, although ongoing, do not occur across the entire range of the wekiu bug. Because there are occupied locations that are not subject to the primary threat of astronomy development, the overall magnitude of the threat is moderate. The immediacy of the threats is imminent because there are still significant parts of the wekiu bug's range where development is occurring. Therefore, we assigned this species an LPN of 8.

Mariana eight spot butterfly (*Hypolimnas octucula mariannensis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Mariana eight spot butterfly is a nymphalid butterfly species that feeds upon two host plants, *Procris pedunculata* and *Elatostema calcareum.* Endemic to the islands of Guam and Saipan, the species is now known from ten populations on Guam. This species is currently threatened by predation and parasitism. The Mariana eight spot butterfly has extremely high mortality of eggs and larvae due to predation by alien ants and wasps. Because the threat of parasitism and predation by nonnative insects occurs rangewide and can cause significant population declines to this species, they are high in magnitude. The threats are imminent because they are ongoing. Therefore, we assigned an LPN of 3 for this subspecies.

Mariana wandering butterfly (*Vagrans egestina*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Mariana wandering butterfly is a nymphalid butterfly species which feeds upon a single host plant species, *Maytenus thompsonii.* Originally known from and endemic to the islands of Guam and Rota, the species is now known from one population on Rota. This species is currently threatened by alien predation and parasitism. The Mariana wandering butterfly is likely predated by alien ants and parasitized by native and nonnative parasitoids. Because the threats of parasitism and predation by nonnative insects occur rangewide and can cause significant population declines to this species, leading to a relatively high likelihood of extinction, they are high in magnitude. These threats are imminent because they are ongoing. Therefore, we assigned an LPN of 2 for this species.

Miami blue butterfly (*Cyclargus thomasi bethunebakeri*)—The following summary is based on information contained in our files and in the petition we received on June 15, 2000. Historically, the Miami blue was most common on the south Florida mainland and the Florida Keys, with a range extending north to Hillsborough and Volusia Counties. It is presently located at two sites in the Keys. In 1999, a metapopulation was discovered at Bahia Honda State Park (BHSP) on Bahia Honda Key, and in 2006 a second metapopulation was discovered on the outer islands of Key West National Wildlife Refuge (KWNWR). The BHSP metapopulation appears restricted to a couple hundred individuals at most; the KWNWR metapopulation was believed to be several hundred in 2006–2007, but appears to be lower in abundance now. Capacity to expand at either site or successfully emigrate from either site appears to be very low due to the sedentary nature of the butterfly and isolation of habitats. Reintroduction efforts have not been successful. The Miami blue is predominantly a coastal species, occurring in disturbed and early successional habitats such as the edges of tropical hardwood hammock, coastal berm forest, coastal prairie, and along trails and other open sunny areas, and historically in pine rockland. These habitats provide hostplants for larvae and nectar sources for adults in close proximity, as the species requires.

Major threats to the butterfly include few occurrences, limited population size and range, hurricanes, mosquito control activities, and herbivory of hostplants by iguanas. Damage to host plants from iguanas at BHSP is an ongoing and significant threat; although active steps are being taken by the State and partners to reduce this threat, this metapopulation is now at risk. Climatic changes and sea level rise are long-term threats that will reduce the extent of habitat. Accidental harm or habitat destruction and illegal collection may also pose threats to the survival due to small population sizes. Loss of genetic diversity within the small and isolated populations may be occurring. The survival of the Miami blue depends on protecting the species' currently occupied habitat from further degradation and fragmentation; restoring potentially suitable habitat within its historical range; avoiding or removing threats from fire suppression, iguanas, mosquito control, accidental harm from humans; increasing the current population in size; and establishing populations at other locations. Exotic predatory ants and

parasitoids may also be potential threats, given the species' small population size and few occurrences. Most threats are high in magnitude, because they constitute a significant risk to the subspecies, leading to a relatively high likelihood of extinction; most threats are imminent. As a result, we retained an LPN of 3 for this subspecies.

Sequatchie caddisfly (*Glyphopsyche sequatchie*)—The following summary is based on information in our files. No new information was provided in the petition we received on May 11, 2004. The Sequatchie caddisfly is known from two spring runs that emerge from caves in Marion County, Tennessee—Owen Spring Branch (the type locality) and Martin Spring run in the Battle Creek system. In 1998, biologists estimated population sizes at 500 to 5,000 individuals for Owen Spring Branch and 2 to 10 times higher at Martin Spring, due to the greater amount of apparently suitable habitat. In spite of greater amounts of suitable habitat at the Martin Spring run, Sequatchie caddisflies are more difficult to find at this site, and in 2001 (the most recent survey) the Sequatchie caddisfly was "abundant" at the Owen Spring Branch location, while only two individuals were observed at the Martin Spring. Threats to the Sequatchie caddisfly include siltation, point and nonpoint discharges from municipal and industrial activities, and introduction of toxicants during episodic events. These threats, coupled with the extremely limited distribution of the species, its apparent small population size, the limited amount of occupied habitat, ease of accessibility, and the annual life cycle of the species, are all factors that leave the Sequatchie caddisfly vulnerable to extirpation. Therefore, the magnitude of the threat is high. These threats are gradual and not necessarily imminent. Based on high-magnitude, nonimminent threats, we assigned this species a listing priority number of 5.

Clifton Cave beetle (*Pseudanophthalmus caecus*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. Clifton Cave beetle is a small, eyeless, reddish-brown predatory insect that feeds upon small cave invertebrates. It is cave dependent, and is not found outside the cave environment. Clifton Cave beetle is only known from two privately owned Kentucky caves. Soon after the species was first collected in 1963 in one cave, the cave entrance was enclosed due to road construction. We do not know whether the species still occurs at the original location or if it has been extirpated from the site by the closure of the cave entrance. Other caves in the vicinity of this cave were surveyed for the species during 1995 to 1996 and only one additional site was found to support the Clifton Cave beetle. The limestone caves in which the Clifton Cave beetle is found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on the more wide-ranging insects. Events such as toxic chemical spills, discharges of large amounts of polluted water or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances could have serious adverse impacts on this species. Therefore, the magnitude of threat is high for this species. The threats are nonimminent because there are no known projects planned that would affect the species in the near future. We therefore have assigned a listing priority number of 5 to this species.

Icebox Cave beetle (*Pseudanophthalmus frigidus*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. Icebox Cave beetle is a small, eyeless, reddish-brown predatory insect that feeds upon small cave invertebrates. It is not found outside the cave environment, and is only known from one privately owned Kentucky cave. The limestone cave in which this species is found provides a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The species has not been observed since it was originally collected, but species experts believe that it may still exist in the cave in low numbers. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on the more wide-ranging insects. Events such as toxic chemical spills or discharges of large amounts of polluted water, or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances, could have serious adverse impacts on this species. Therefore, the magnitude of threat is high for this species because it is limited in distribution and the threats would result in a high level of mortality or reduced reproductive capacity. The threats are nonimminent because there are no known projects planned that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

Inquirer Cave beetle (*Pseudanophthalmus inquisitor*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Inquirer Cave beetle is a fairly small, eyeless, reddish-brown predatory insect that feeds upon small cave invertebrates. It is not found outside the cave environment, and is only known from one privately owned Tennessee cave. The limestone cave in which this species is found provides a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The species was last observed in 2006. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on the more wide-ranging insects. The area around the only known site for the species is in a rapidly expanding urban area. The entrance to the cave is protected by the landowner through a cooperative management agreement with the Service, The Nature Conservancy and Tennessee Wildlife Resources Agency; however, a sinkhole that drains into the cave system is located away from the protected entrance and is near a highway. Events such as toxic chemical spills, discharges of large amounts of polluted water, or indirect impacts from off-site construction activities, could severely affect the species and the cave habitat. The magnitude of threat is high for this species because it is limited in distribution and the threats would have severe impacts on its continued existence. The threats are nonimminent because there are no known projects planned that would affect the species in the near future and it receives some protection under a cooperative management agreement. We therefore have assigned a listing priority number of 5 to this species.

Louisville Cave beetle (*Pseudanophthalmus troglodytes*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Louisville Cave beetle is a small, eyeless, reddish-brown predatory insect that feeds upon cave invertebrates. It is not found outside the cave environment, and is only known from two privately owned Kentucky caves. The limestone

caves in which this species is found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on the more wide-ranging insects. Events such as toxic chemical spills, discharges of large amounts of polluted water or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances could have serious adverse impacts on this species. The magnitude of threat is high for this species, because it is limited in distribution and the threats would have severe negative impacts on the species. The threats are nonimminent because there are no known projects planned that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

Tatum Cave beetle (*Pseudanophthalmus parvus*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. Tatum Cave beetle is a small, eyeless, reddish-brown predatory insect that feeds upon cave invertebrates. It is not found outside the cave environment, and is only known from one privately owned Kentucky cave. The limestone cave in which this species is found provides a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The species has not been observed since 1965, but species experts believe that it still exists in low numbers. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on the more wide-ranging insects. Events such as toxic chemical spills or discharges of large amounts of polluted water, or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances could have serious adverse impacts on this species. The magnitude of threat is high for this species, because its limited numbers mean that any threats could severely affect its continued existence. The threats are nonimminent because there are no known projects planned that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

Taylor's (Whulge, Edith's) checkerspot butterfly (*Euphydryas editha taylori*)—The following summary is based on information contained in our files and in the petition received on December 11, 2002. Historically, the Taylor's checkerspot butterfly was known from 70 locations: 23 in British Columbia, 34 in Washington, and 13 in Oregon. Based on the results of surveys during the 2009 flight period, butterflies were detected at just 9 populations. No reports were received for the Canada sites. The total number of Taylor's checkerspot butterflies was considerably reduced in current surveys with approximately 2,500 individuals observed rangewide. The latest decline observed was from the Joint Base Lewis McChord population where fewer than 200 butterflies were counted in 2008; only 77 adult butterflies were detected during 2009 surveys. Currently, just seven populations had adult butterflies flying in Washington, two in the Willamette Valley of Oregon, and one on Denman Island, British Columbia, Canada. A new population (meta-population) was observed on the Olympic National Forest. During 2009, six additional locations have been found on suitable habitat on Olympic National Forest land; at one location 69 butterflies were detected and the remainder had up to 40 butterflies with several of the sites having fewer than 5 adult butterflies.

Threats include degradation and destruction of native grasslands due to agriculture; residential and commercial development; encroachment by nonnative plants; succession from grasslands to native shrubs and trees; and fire. The threat of military training has greatly increased during this last assessment period and the site where Taylor's checkerspot were known to thrive on Fort Lewis was severely affected by Armored Vehicle training. The result of that training on the population at the site will not be determined until after this year's monitoring has been completed.

The grassland ecosystem on which this subspecies depends requires annual management to maintain suitable grassland habitat for the species. *Bacillus thuringiensis* var. *kurstake* (Btk) was routinely applied for Asian gypsy moth control in Pierce County, Washington for many years. This pesticide is documented to have deleterious effects on non-target lepidopteron species, including all moths and butterflies. Because of the timing and close proximity of the Btk application to native prairies where Taylors' checkerspot adults, or their larvae, were historically known to occur, it is likely that the spraying contributed to the extirpation of the subspecies at three locations in Pierce County, Washington.

Threats also include the loss of prairies to development or the conversion of native grasslands to agriculture; the threat of vehicle and foot traffic that crushes larvae and larval host plants on roads where host plants have become established, thus acting as a mortality sink (this has occurred at several of the north Olympic Peninsula sites). Other important threats include changes to the structure and composition of prairie habitat brought on by the invasion of shrubs and trees (Scot's broom and Douglas-fir) or nonnative pasture grasses that quickly invade onto prairies when processes like fire, or its surrogate mowing, are not implemented.

These changes to prairie habitat threaten Taylor's checkerspot by degrading prairie habitat and making it unsuitable for the butterfly. The threats that lead to habitat degradation and loss are ubiquitous, occurring rangewide, and severely affect the survival of the subspecies, leading to a relatively high likelihood of extinction. Therefore, the threats are high in magnitude. The threats are imminent because they are ongoing and occur simultaneously at all of the known locations for the subspecies. Based on the high magnitude and the imminent nature of threats, we retain an LPN of 3 for the Taylor's checkerspot butterfly.

Blackline Hawaiian damselfly (*Megalagrion nigrohamatum nigrolineatum*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Crimson Hawaiian damselfly (*Megalagrion leptodemas*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Oceanic Hawaiian damselfly (*Megalagrion oceanicum*)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Orangeblack Hawaiian damselfly (*Megalagrion xanthomelas*)—The following summary is based on information contained in our files. No

new information was provided in the petition we received on May 11, 2004. The Orangeblack Hawaiian damselfly is a stream-dwelling species endemic to the Hawaiian Islands of Kauai, Oahu, Molokai, Maui, Lanai, and Hawaii. The species no longer is found on Kauai, and is now restricted to 16 populations on the islands of Oahu, Maui, Molokai, Lanai, and Hawaii. This species is threatened by predation from alien aquatic species such as fish and predacious insects, and habitat loss through dewatering of streams and invasion by nonnative plants. Nonnative fish and insects prey on the naiads of the damselfly, and loss of water reduces the amount of suitable naiad habitat available. Invasive plants (*e.g.,* California grass (*Brachiaria mutica*)) also contribute to loss of habitat by forming dense, monotypic stands that completely eliminate any open water. Nonnative fish and plants are found in all the streams the Orangeblack damselfly occur in, except the Oahu location, where there are no nonnative fish. We assigned this species an LPN of 8 because, although the threats are ongoing and therefore imminent, they affect the survival of the species in varying degrees throughout the range of the species and are of moderate magnitude.

Picture-wing fly (*Drosophila digressa*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004, but new information was provided by one *Drosophila* expert in 2006. This picture-wing fly, a member of the family Drosophilidae, feeds only upon species of *Charpentiera,* and is endemic to the Hawaiian Island of Hawaii. Never abundant in number of individuals observed, *D. digressa* was originally known from 5 population sites and may now be limited to as few as 1 or 2 sites. Due to the small population size of the species and its small known habitat area, *Drosophila* researchers believe this species and its habitat are particularly vulnerable to a myriad of threats. Feral ungulates (pigs, goats, and cattle) degrade and destroy *D. digressa* host plants and habitat by directly trampling plants, facilitating erosion, and spreading nonnative plant seeds. Nonnative plants degrade host plant habitat and compete for light, space, and nutrients. Direct predation of *D. digressa* by nonnative social insects, particularly yellow jacket wasps, is also a serious threat. Additionally, this species faces competition at the larval stage from nonnative tipulid flies, which feed within the same portion of the decomposing host plant area normally occupied by the *D. digressa* larvae during their development with a resulting reduction in available host plant material. Because the threats to the native forest habitat of *D. digressa,* and to individuals of this species, occur throughout its range and are expected to continue or increase unless efforts at control or eradication are undertaken, they are high in magnitude. In addition, because of the limited distribution and small population of the species, any of the threats would significantly impair survival of the species. The threats are also imminent, because they are ongoing. No known conservation measures have been taken to date to specifically address these threats, and we have therefore assigned this species an LPN of 2.

Stephan's riffle beetle (*Heterelmis stephani*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Stephan's riffle beetle is an endemic riffle beetle found in limited spring environments within the Santa Rita Mountains, Pima County, Arizona. The beetle is known from Sylvester Spring in Madera Canyon, within the Coronado National Forest. Threats to that spring are largely from habitat modification, from recreational activities in the springs, and potential changes in water quality and quantity due to catastrophic natural events and climate change. The threats are of low to moderate magnitude based on our current knowledge of the permanence of threats and the likelihood that the species will persist in areas that are unaffected by the threats. Although the threats from climate change are expected to occur over many years, the threats from recreational use are ongoing. Therefore, the threats are imminent. Thus, we retained an LPN of 8 for the Stephan's riffle beetle.

Dakota skipper (*Hesperia dacotae*)—The following summary is based on information contained in our files, including information from the petition received on May 12, 2003. The Dakota skipper is a small- to mid-sized butterfly that inhabits high-quality tallgrass and mixed-grass prairie in Minnesota, North Dakota, South Dakota, and the provinces of Manitoba and Saskatchewan in Canada. The species is presumed to be extirpated from Iowa and Illinois and from many sites within occupied States.

The Dakota skipper is threatened by degradation of its native prairie habitat by overgrazing, invasive species, gravel mining, and herbicide applications; inbreeding, population isolation, and prescribed fire threaten some populations. Prairie succeeds to shrubland or forest without periodic fire, grazing, or mowing; thus, the species is also threatened at sites where such disturbances are not applied. The Service and other Federal agencies, State agencies, the Sisseton-Wahpeton Sioux Tribe, and some private organizations (*e.g.,* The Nature Conservancy) protect and manage some Dakota skipper sites. Proper management is always necessary to ensure its persistence, even at protected sites. The species may be secure at a few sites where public and private landowners manage native prairie in ways that conserve Dakota skipper, but approximately half of the inhabited sites are privately owned with little or no protection. A few private sites are protected from conversion by easements, but these do not prevent adverse effects from overgrazing. Overall, the threats are moderate in magnitude because they are not occurring rangewide and have a moderate effect on the viability of the species. They are, however, ongoing and therefore imminent, particularly on private lands. Thus, we assigned an LPN of 8 to this species.

Mardon skipper (*Polites mardon*)—The following summary is based on information contained in our files and the petition we received on December 24, 2002. The Mardon skipper is a northwestern butterfly with a disjunct range. Currently this species is known from four widely separated regions: South Puget Sound region, southern Washington Cascades, Siskiyou Mountains of southern Oregon, and coastal northwestern California/southern Oregon. The number of documented locations for the species has increased from fewer than 10 in 1997 to more than 130 rangewide in 2010. New site locations have been documented in each year that targeted surveys have been conducted since 1999. In the past 9 years, significant local populations have been located in the Washington Cascades and in Southern Oregon, with a few local sites supporting populations of hundreds of Mardon skippers.

The Mardon skipper spends its entire life cycle in one location, often on the same grassland patch. The dispersal ability of Mardon skipper is restricted. The greatest threats currently posed to Mardon skippers are stochastic events such as a catastrophic wildfire or unseasonable weather events. Other threats to the Mardon skipper include direct impacts to individuals and local populations by livestock grazing, pesticide drift, and off-road-vehicle use. Habitat destruction or modification

through conifer encroachment, invasive nonnative plants, roadside maintenance, and grassland/meadow management activities such as prescribed burning and mowing are also threats. However, these threats have been substantially reduced due to protections provided by State and Federal special status species programs. The magnitude of the threats is moderate because current regulatory mechanisms associated with State and Federal special status species programs afford a relatively high level of protection from additional habitat loss or destruction across most of the species' range. Threats are imminent because all sites within the species' range currently have one or more identified threats that are resulting in direct impacts to individuals within the populations, or a gradual loss or degradation of the species' habitats. Mardon skippers face a variety of threats that may occur at any time at any of the locations. Low numbers of individuals have been found at most of the known locations. Only a few locations are known to harbor greater than 100 individuals, and specific locations could easily be lost by changes in vegetation composition or from the threat of wildfire. The great distances between the known locations for the species would not allow for dispersal of the species between populations; thus, loss of any population could lead to extirpation of the species at any of these locations. However, the discovery of new populations and the wide geographic range for the Mardon skipper provides a buffer against threats that could destroy all existing habitat simultaneously or jeopardize the continued existence of the species. Thus, based on imminent threats of moderate magnitude, we retain an LPN of 8 to this species.

Coral Pink Sand Dunes tiger beetle (*Cicindela limbata albissima*)—The following summary is based on information contained in our files, including information from the petition we received on April 21, 1994. This species of beetle occurs only at the Coral Pink Sand Dunes. This area is approximately 7 miles west of Kanab, Kane County, in south-central Utah. It is restricted to approximately 234 hectares (577 acres) of protected habitat within the dune field, situated at an elevation of about 1,820 meters (6,000 feet). Continuing drought is negatively affecting tiger beetle populations. Drought conditions have suppressed the beetle's reproductive capabilities. The continued survival of the beetle depends on the preservation of its habitat and favorable rainfall amounts. In addition, the beetle's habitat is being adversely affected by ongoing, recreational off-road-vehicle use that is limiting expansion of the species. The two agencies that manage the dune field, the Utah Department of Parks and Recreation and the BLM, have restricted recreational off-road vehicle use in some areas, which reduces impacts. However, continued drought may prevent the population from increasing in size. The beetle's population also is vulnerable to over-collecting by professional and hobby tiger beetle collectors. We retained an LPN of 2 due to the high magnitude and imminence of drought conditions.

Highlands tiger beetle (*Cicindela highlandensis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Highlands tiger beetle is narrowly distributed and restricted to areas of bare sand within scrub and sandhill on ancient sand dunes of the Lake Wales Ridge in Polk and Highlands Counties, Florida. Adult tiger beetles have been most recently found at 40 sites at the core of the Lake Wales Ridge. In 2004–2005 surveys, a total of 1,574 adults were found at 40 sites, compared with 643 adults at 31 sites in 1996, 928 adults at 31 sites in 1995, and 742 adults at 21 sites in 1993. Of the 40 sites in the 2004–2005 surveys with one or more adults, results ranged from 3 sites with large populations of over 100 adults, to 13 sites with fewer than 10 adults. Results from a limited removal study at four sites and similar studies suggest that the actual population size at some survey sites can be as much as two times as high as indicated by the visual index counts. If assumptions are correct and unsurveyed habitat is included, then the total number of adults at all survey sites might be 3,000 to 4,000.

Habitat loss and fragmentation and lack of fire and disturbances to create open habitat conditions are serious threats; remaining patches of suitable habitat are disjunct and isolated. Populations occupy relatively small patches of habitat and are small and isolated; individuals have difficulty dispersing between suitable habitats. These factors pose serious threats to the species. Although significant progress in implementing prescribed fire has occurred over the last ten years through collaborative partnerships and the Lake Wales Ridge Prescribed Fire Team, a backlog of long-unburned habitat within conservation areas remains. Overcollection and pesticide use are additional concerns. Because this species is narrowly distributed with specific habitat requirements and small populations, any of the threats could have a significant impact on the survival of the species, leading to a relatively high likelihood of extinction. Therefore, the magnitude of threats is high. Although the majority of its historical range has been lost, degraded, and fragmented, numerous sites are protected and land managers are implementing prescribed fire at some sites; these actions are expected to restore habitat and help reduce threats and have already helped stabilize and improve the populations. Overall, the threats are nonimminent. Therefore, we assigned the Highlands tiger beetle an LPN of 5.

Arachnids

Warton's cave meshweaver (*Cicurina wartoni*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Warton's Cave meshweaver is an eyeless, cave-dwelling, unpigmented, 0.23-inch-long invertebrate known only from female specimens. This meshweaver is known to occur in only one cave (Pickle Pit) in Travis County, Texas. Primary threats to the species and its habitat are predation and competition from fire ants, surface and subsurface effects from runoff from an adjacent subdivision, unauthorized entry into the area surrounding the cave, modification of vegetation near the cave from human use, and trash dumping that may include toxic materials near the feature. The magnitude of threats is high because the single location for this species makes it highly vulnerable to extinction. The threats are imminent because fire ants are known to occur in the vicinity of the cave, and impacts to the cave from runoff and human activities are an imminent threat. Thus, we retain an LPN of 2 for this species.

Crustaceans

Anchialine pool shrimp (*Metabetaeus lohena*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Metabetaeus lohena* is an anchialine pool-inhabiting species of shrimp belonging to the family Alpheidae. This species is endemic to the Hawaiian Islands and is currently known from populations on the islands of Oahu, Maui, and Hawaii. The primary threats to this species are predation by fish (which do not naturally occur in the pools inhabited by this species) and habitat loss from degradation (primarily from illegal trash dumping). The pools where this species

occurs on the islands of Maui and Hawaii are located within State Natural Area Reserves (NAR) and in a National Park. Both the State NARs and the National Park prohibit the collection of the species and the disturbance of the pools. However, enforcement of collection and disturbance prohibitions is difficult, and the negative effects from the introduction of fish are extensive and happen quickly. On Oahu, one pool is located in a National Wildlife Refuge and is protected from collection and disturbance to the pool, however, on State-owned land where the species occurs, there is no protection from collection or disturbance of the pools. Therefore, threats to this species could have a significant adverse effect on the survival of the species, leading to a relatively high likelihood of extinction, and are of a high magnitude. However, the primary threats of predation from fish and loss of habitat due to degradation are nonimminent overall, because on the islands of Maui and Hawaii no fish were observed in any of the pools where this species occurs and there has been no documented trash dumping in these pools. Only one site on Oahu had a trash dumping instance, and in that case the trash was cleaned up immediately and the species subsequently observed. No additional dumping events are known to have occurred. Therefore, we assigned this species an LPN of 5.

Anchialine pool shrimp (*Palaemonella burnsi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Palaemonella burnsi* is an anchialine pool-inhabiting species of shrimp belonging to the family Palaemonidae. This species is endemic to the Hawaiian Islands and is currently known from 3 pools on the island of Maui and 22 pools on the island of Hawaii. The primary threats to this species are predation by fish (which do not naturally occur in the pools inhabited by this species) and habitat loss due to degradation (primarily from illegal trash dumping). The pools where this species occurs on Maui are located within a State Natural Area Reserve (NAR). Hawaii's State statutes prohibit the collection of the species and the disturbance of the pools in State NARs. On the island of Hawaii, the species occurs within a State NAR and a National Park, and collection and disturbance are also prohibited. However, enforcement of these prohibitions is difficult, and the negative effects from the introduction of fish are extensive and happen quickly. Therefore, threats to this species could have a significant adverse effect on the survival of the species, leading to a relatively high likelihood of extinction, and are of a high magnitude. However, the threats are nonimminent, because surveys in 2004 and 2007 did not find fish in the pools where these shrimp occur on Maui or the island of Hawaii. Also, there was no evidence of recent habitat degradation at those pools. We assigned this species an LPN of 5.

Anchialine pool shrimp (*Procaris hawaiana*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Procaris hawaiana* is an anchialine pool-inhabiting species of shrimp belonging to the family Procarididae. This species is endemic to the Hawaiian Islands, and is currently known from two pools on the island of Maui and thirteen pools on the island of Hawaii. The primary threats to this species are predation from fish (which do not naturally occur in the pools inhabited by this species) and habitat loss due to degradation (primarily from illegal trash dumping). The pools where this species occurs on Maui are located within a State Natural Area Reserve (NAR). Hawaii's State statutes prohibit the collection of the species and the disturbance of the pools in State NARs. Twelve of the pools on the island of Hawaii are also located within a State NAR. However, enforcement of these prohibitions is difficult and the negative effects from the introduction of fish are extensive and happen quickly. In addition, there are no prohibitions for either removal of the species or disturbance to the pool for the one pool located outside a NAR on the island of Hawaii. Therefore, threats to this species could have a significant adverse effect on the survival of the species, leading to a relatively high likelihood of extinction, and thus remain at a high magnitude. However, the threats to the species are nonimminent because, during 2004 and 2007 surveys, no fish were observed in the pools where these shrimp occur on Maui, and no fish were observed in the one pool on the island of Hawaii during a site visit in 2005. In addition, there were no signs of trash dumping or fill in any of the pools where the species occurs. Therefore, we assigned this species an LPN of 5.

Anchialine pool shrimp (*Vetericaris chaceorum*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Vetericaris chaceorum* is an anchialine pool-inhabiting species of shrimp belonging to the family Procarididae; it is the only species in its genus. This species is endemic to the Hawaiian Islands, and is only known from one population in a single pool on the island of Hawaii. The primary threats to this species are predation from nonnative fish and habitat degradation (primarily by contamination from illegal trash dumping). This species would be highly vulnerable to predation by any intentionally or accidentally introduced fish, or contamination from illegal dumping into its single known location. This pool lies within lands administered by the State of Hawaii Department of Hawaiian Home Lands. The threats to *V. chaceorum* from habitat degradation and destruction, as well as from predation by nonnative fish are of high magnitude, because this species occurs in only one pool; thus, the threats could significantly impair the survival of the species, leading to a relatively high likelihood of extinction. All individuals of this species may be severely affected by a single dumping of trash or release of nonnative fish in the species' only known pool. However, the threats are nonimminent, as fish have not been introduced into the pool (nor is there any reason to believe that introduction is imminent) and a site visit in early 2005 showed there were no signs of dumping or fill. Therefore we assigned this species an LPN of 4 because the threats are of high magnitude but nonimminent, and the species is in a monotypic genus.

Flowering Plants

Abronia alpina (Ramshaw Meadows sand-verbena)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Abronia alpina* is known from one main population center in Ramshaw Meadow and a smaller population in adjacent Templeton Meadow on the Kern Plateau of the Sierra Nevada, Inyo National Forest, in Tulare County, California. The total estimated area occupied is approximately 6 hectares (15 acres). The population fluctuates from year to year without any clear trends. Population estimates from 1985–1994 range from a low of 69,652 plants in 1986 to 132,215 plants in 1987. Surveys conducted since 1994 indicate that no significant changes have occurred in population size or location, although, the 2003 survey showed population numbers to be at the low end of the range. The population was last monitored in 2009, and results from those studies are still being analyzed.

The factors currently threatening *Abronia alpina* include natural and human habitat alteration, hydrologic changes to the water table, and recreational use within meadow habitats. Lodgepole pine encroachment has altered the meadow, and trees are becoming established within *A. alpina* habitat. Lodgepole pine encroachment may alter soil characteristics by increasing organic matter levels, decreasing porosity, and moderating diurnal temperature fluctuations thus reducing the competitive ability of *A. alpina* to persist in an environment more hospitable to other plant species. The Ramshaw Meadow ecosystem is subject to potential alteration by lowering of the water table due to downcutting of the South Fork of the Kern River (SFKR). The SFKR flows through Ramshaw Meadow, at times coming within 15 m (50 ft) of *A. alpina* habitat, particularly in the vicinity of five subpopulations. The habitat occupied by *A. alpina* directly borders the meadow system supported by the SFKR. Drying out of the meadow system could potentially affect *A. alpina* pollinators and/or seed dispersal agents.

Established hiker, packstock, and cattle trails pass through *A. alpina* subpopulations. Two main hiker trails pass through Ramshaw Meadow, but were rerouted out of *A. alpina* subpopulations where feasible, in 1988 and 1997. Remnants of cattle trails that pass through subpopulations in several places receive occasional incidental use by horses and sometimes hikers. Cattle use, however, currently is not a threat due to the 2001 implementation of a 10-year moratorium on the Templeton allotment which prohibits cattle from all *A. alpina* locations. The Service is funding studies to determine appropriate conservation measures and working with the U.S. Forest Service on developing a conservation strategy for the species. The threats are of a low magnitude and nonimminent because of the conservation actions already implemented. The LPN for *A. alpina* remains an 11, with nonimminent threats of moderate to low magnitude.

Arabis georgiana (Georgia rockcress)—The following summary is based on information in our files. No new information was provided in the petition we received on May 11, 2004. The Georgia rockcress grows in a variety of dry situations, including shallow soil accumulations on rocky bluffs, ecotones of gently sloping rock outcrops, and in sandy loam along eroding river banks. It is occasionally found in adjacent mesic woods, but it will not persist in heavily shaded conditions. Currently, 17 populations are known from the Gulf Coastal Plain, Piedmont, and Ridge and Valley physiographic provinces of Alabama and Georgia. Populations of this species typically have a limited number of individuals over a small area.

Habitat degradation, more than outright habitat destruction, is the most serious threat to the continued existence of this species. Disturbance, associated with timber harvesting, road building, and grazing has created favorable conditions for the invasion of exotic weeds, especially Japanese honeysuckle (*Lonicera japonica*), in this species' habitat. A large number of the populations are currently or potentially threatened by the presence of exotics. The heritage programs in Alabama and Georgia have initiated plans for exotic control at several populations. The magnitude of threats to this species is moderate to low due to the number of populations (17) across multiple counties in two states and due to the fact that several sites are protected. However, since a number of the populations are currently being affected by nonnative plants, the threat is imminent. Thus, we assigned an LPN of 8 to this species.

Argythamnia blodgettii (Blodgett's silverbush)—The following summary is based on information in our files. No new information was provided in the petition we received on May 11, 2004. Blodgett's silverbush occurs in Florida and is found in open, sunny areas in pine rockland, edges of rockland hammock, edges of coastal berm, and sometimes in disturbed areas at the edges of natural areas. Plants can be found growing from crevices on limestone, or on sand. The pine-rockland habitat where the species occurs in Miami-Dade County and the Florida Keys requires periodic fires to maintain habitat with a minimum amount of hardwoods. There are approximately 22 extant occurrences, 12 in Monroe County and 10 in Miami-Dade County; many occurrences are on conservation lands. However, 4 to 5 sites are recently thought to be extirpated. The estimated population size of Blodgett's silverbush in the Florida Keys, excluding Big Pine Key, is roughly 11,000; the estimated population in Miami-Dade County is 375 to 13,650 plants.

Blodgett's silverbush is threatened by habitat loss, which is exacerbated by habitat degradation due to fire suppression, the difficulty of applying prescribed fire to pine rocklands, and threats from exotic plants. Remaining habitats are fragmented. Threats such as road maintenance and enhancement, infrastructure, and illegal dumping threaten some occurrences. Blodgett's silverbush is vulnerable to natural disturbances, such as hurricanes, tropical storms, and storm surges. Climatic change, particularly sea-level rise, is a long-term threat that is expected to continue to affect pine rocklands and ultimately substantially reduce the extent of available habitat, especially in the Keys. Overall, the magnitude of threats is moderate because not all of the occurrences are affected by the threats. In addition, land managers are aware of the threats from exotic plants and lack of fire, and are, to some extent, working to reduce these threats where possible. While a number of threats are occurring in some areas, the threat from development is nonimminent since most occurrences are on public land, and sea level rise is not currently affecting this species. Overall, the threats are nonimminent. Thus, we assigned an LPN of 11 to this species.

Artemisia campestris var. *wormskioldii* (Northern wormwood)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Historically known from eight sites, northern wormwood is currently known from two populations in Klickitat and Grant Counties, Washington. This plant is restricted to exposed basalt, cobbly-sandy terraces, and sand habitat along the shore and on islands in the Columbia River. The two populations are separated by 200 miles (322 kilometers) of the Columbia River and three large hydroelectric dams. The Klickitat County population is declining; the status is unclear for the Grant County population; however, both are vulnerable to environmental variability. Surveys have not detected any additional plants.

Threats to northern wormwood include direct loss of habitat through regulation of water levels in the Columbia River and placement of riprap along the river bank; human trampling of plants from recreation; competition with nonnative invasive species; burial by wind- and water-borne sediments; small population sizes; susceptibility to genetic drift and inbreeding; and the potential for hybridization with two other species of *Artemisia.* Ongoing conservation actions have reduced trampling, but have not eliminated or reduced the other threats at the Grant County site. Active conservation measures are not currently in place at the Klickitat County site. The magnitude of threat is high for this subspecies because, although the two remaining populations are widely separated and distributed, one or both populations

could be eliminated by a single disturbance. The threats are imminent because recreational use is ongoing, invasive nonnative species occur at both sites, erosion of the substrate is ongoing at the Klickitat County site, and high water flows are random, naturally occurring events that may occur unpredictably in any year. Therefore, we have retained an LPN of 3 for this subspecies.

Astragalus anserinus (Goose Creek milkvetch)—The following summary is based on information in our files and in the petition received on February 3, 2004. The majority (over 80 percent) of *Astragalus anserinus* sites in Idaho, Utah, and Nevada occur on Federal lands managed by the BLM. The rest of the sites occur as small populations on private and State lands in Utah and on private land in Idaho and Nevada. *A. anserinus* occurs in a variety of habitats, but is typically associated with dry tuffaceous soils from the Salt Lake Formation. The species grows on steep or flat sites, with soil textures ranging from silty to sandy to somewhat gravelly. The species tolerates some level of disturbance, based on its occurrence on steep slopes where downhill movement of soil is common. Threats to remaining *A. anserinus* individuals include future habitat degradation and modifications to the ecosystem in which it occurs because of an altered wildfire regime. Approximately 98 percent of the individual plants that were previously documented in the areas burned by a 2007 wildfire were killed. Other factors that may threaten *A. anserinus* to a lesser extent include livestock use and the inadequacy of regulatory mechanisms. Climate change effects to Goose Creek drainage habitats are possible, but we are unable to predict the specific impacts of this change to *A. anserinus* at this time. Threats are high in magnitude since these threats have the potential to destroy whole populations. The threats are nonimminent since they may occur in the foreseeable future but not in the near future. Thus, we have assigned *A. anserinus* an LPN of 5.

Astragalus tortipes (Sleeping Ute milkvetch)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Sleeping Ute milkvetch is a perennial plant that grows only on the Smokey Hills layer of the Mancos Shale Formation on the Ute Mountain Ute Indian Reservation in Montezuma County, Colorado. In 2000, 3,744 plants were recorded at 24 locations covering 500 acres within an overall range of 64,000 acres. Available information from 2000 indicates that the species remains stable. Previous and ongoing threats from borrow pit excavation, off-highway vehicles, irrigation canal construction, and a prairie dog colony have had minor impacts that reduced the range and number of plants by small amounts. Off-highway-vehicle use of the habitat has reportedly been controlled by fencing. Oil and gas development is active in the general area, but the Service has received no information to indicate whether there is development within plant habitat. The Tribe reported that the status of the species remains unchanged, the population is healthy, and that a management plan for the species is currently in draft form. Despite these positive indications, we have no documentation concerning the current status of the plants, condition of habitat, and terms of the species management plan being drafted by the Tribe. Thus, at this time, we cannot accurately assess whether populations are being adequately protected from previously existing threats. The threats are moderate in magnitude, since they have had minor impacts. Based on information we have, the population appears to be stable. Until the management plan is completed and made available, there are no regulatory mechanisms in place to protect the species. Overall, we conclude threats are nonimminent. Therefore, we assigned an LPN of 11 to this species.

Bidens amplectens (Kookoolau)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Bidens campylotheca ssp. *pentamera* (Kookoolau)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Bidens campylotheca ssp. *waihoiensis* (Kookoolau)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Bidens conjuncta (Kookoolau)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Bidens micrantha ssp. *ctenophylla* (Kookoolau)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Bidens micrantha* ssp. *ctenophylla* is a perennial herb found in open mixed shrubland to dry *Metrosideros* (ohia) forest, and in recently deposited a'a lava, on the island of Hawaii, Hawaii. This subspecies is known from 4 populations totaling approximately 360 individuals. *Bidens micrantha* ssp. *ctenophylla* is threatened by competition with nonnative plants, and is potentially threatened by habitat loss due to urban development and fire. One wild population of 5 individuals is protected by an exclosure, and three outplanted populations are protected by exclosures. The remaining natural populations are not protected or managed and are subject to development. The threats are high in magnitude because the largest population of this subspecies is highly threatened by urban development and all populations are threatened by fire and nonnative plants, leading to a relatively high likelihood of extinction. *Bidens micrantha* ssp. *ctenophylla* is represented in ex situ collections. Threats to this subspecies from competition with nonnative plants are imminent. Urban development and fire are potential threats and are non-imminent. Therefore, we retained an LPN of 3 for this subspecies.

Brickellia mosieri (Florida brickell-bush)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is restricted to pine rocklands of Miami-Dade County, Florida. This habitat requires periodic prescribed fires to maintain the low understory and prevent encroachment by native tropical hardwoods and exotic plants, such as Brazilian pepper. Only one large occurrence is known to exist; 15 other occurrences contain less than 100 individuals. Eleven occurrences are on conservation lands, while the rest of the extant populations are on private land and are currently vulnerable to habitat loss and degradation.

Climatic changes and sea-level rise are long-term threats that will reduce the extent of habitat. This species is threatened by habitat loss, which is exacerbated by habitat degradation due to fire suppression, the difficulty of applying prescribed fire to pine rocklands, and threats from exotic plants. Remaining habitats are

fragmented. The species is vulnerable to natural disturbances, such as hurricanes, tropical storms, and storm surges. Due to its restricted range and the small sizes of most isolated occurrences, this species is vulnerable to environmental (catastrophic hurricanes), demographic (potential episodes of poor reproduction), and genetic (potential inbreeding depression) threats. Ongoing conservation efforts include projects aimed at facilitating restoration and management of public and private lands in Miami-Dade County and projects to reintroduce and establish new populations at suitable sites within the species' historical range. The Service is also pursuing additional habitat restoration projects, which could help further improve the status of the species. Because of these efforts, the overall magnitude of threats is moderate. The threats are ongoing and thus imminent. We assigned this species an LPN of 8.

Calamagrostis expansa (Maui reedgrass)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Calamagrostis expansa* is a perennial grass found in wet forest and bogs, and in bog margins, on the islands of Maui and Hawaii, Hawaii. This species is known from 13 populations totaling fewer than 750 individuals. *Calamagrostis expansa* is threatened by habitat degradation and loss by feral pigs, and by competition with nonnative plants. Predation by feral pigs is a potential threat to this species. All of the known populations of *C. expansa* on Maui occur in managed areas. Pig exclusion fences have been constructed and control of nonnative plants is ongoing within the exclosures. On the island of Hawaii, fencing is planned for the population in the Upper Waiakea Forest Reserve. This species is represented in an ex situ collection. Threats to this species from feral pigs and nonnative plants are ongoing, or imminent, and of high magnitude because they significantly affect the species throughout its range, leading to a relatively high likelihood of extinction. Predation is a nonimminent threat. Therefore, we retained an LPN of 2 for this species.

Calamagrostis hillebrandii (Hillebrand's reedgrass)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Calochortus persistens (Siskiyou mariposa lily)—The following summary is based on information contained in our files and the petition we received on September 10, 2001. The Siskiyou mariposa lily is a narrow endemic that is restricted to three disjunct ridge tops in the Klamath-Siskiyou Range on the California-Oregon border. The southernmost occurrence of this species is composed of nine separate sites on approximately 10 hectares (ha) (24.7 acres (ac)) of Klamath National Forest and privately owned lands that stretch for 6 kilometers (km) (3.7 miles (mi)) along the Gunsight-Humbug Ridge, Siskiyou County, California. In 2007, a new occurrence was confirmed in the locality of Cottonwood Peak and Little Cottonwood Peak, Siskiyou County, where several populations are distributed over 164 ha (405 ac) on three individual mountain peaks in the Klamath National Forest and on private lands. The northernmost occurrence consists of not more than five Siskiyou mariposa lily plants that were discovered in 1998, on Bald Mountain, west of Ashland, Jackson County, Oregon.

Major threats include competition and shading by native and nonnative species fostered by suppression of wild fire; increased fuel loading and subsequent risk of wild fire; fragmentation by roads, fire breaks, tree plantations, and radio-tower facilities; maintenance and construction around radio towers and telephone relay stations located on Gunsight Peak and Mahogany Point; and soil disturbance, direct damage, and exotic weed and grass species introduction as a result of heavy recreational use and construction of fire breaks. Dyer's woad (*Isatis tinctoria*), an invasive, nonnative plant that may prevent germination of Siskiyou mariposa lily seedlings, is now found throughout the southernmost California occurrence, affecting 75 percent of the known lily habitat on Gunsight-Humbug Ridge. Forest Service staff and the Klamath-Siskiyou Wildlands Center cite competition with dyer's woad as a significant and chronic threat to the survival of Siskiyou mariposa lily.

The combination of restricted range, extremely low numbers (five plants) in one of three disjunct populations, poor competitive ability, short seed dispersal distance, slow growth rates, low seed production, apparently poor survival rates in some years, herbivory, habitat disturbance, and competition from exotic plants threaten the continued existence of this species. These threats are of high magnitude because of their potential to severely reduce the overall survival of the species. Because the threats of competition from exotic plants are being addressed, they are not anticipated to overwhelm a large portion of the species' range in the immediate future, and the threats from low seed production and survival are longer-term threats, overall the threats are nonimminent. Therefore, we assigned a listing priority number of 5 to this species.

Canavalia pubescens (Awikiwiki)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Canavalia pubescens* is a perennial climber found in open lava fields and lowland dryland forest in Hawaii on the island of Maui, last observed on the island of Lanai in 1998, and was last observed on the island of Niihau in 1949. This species is known from 5 populations totaling 360 to 500 individuals. *Canavalia pubescens* is threatened by development (Maui), goats (Maui) and axis deer (Maui and Lanai) that degrade and destroy habitat, and by nonnative plants that outcompete and displace native plants (both islands). Fire is a possible threat at the Keokea population on Maui. Ungulate exclosure fences protect 6 individuals of *C. pubescens* at Papaka Kai and 20 to 30 individuals at Ahihi-Kinau NAR, and weed control is ongoing at these locations on Maui. This species is represented in *ex situ* collections. Threats to this species from feral goats, axis deer, and nonnative plants are ongoing, or imminent, and of high magnitude because they severely affect the species throughout its range, leading to a relatively high likelihood of extinction. Fire is a nonimminent threat. Therefore, we retained an LPN of 2 for this species.

Castilleja christii (Christ's paintbrush)—The following summary is based on information contained in our files and the petition we received on January 2, 2001. *Castilleja christii* is found in one population covering approximately 85 ha (220 ac) on the summit of Mount Harrison in Cassia County, Idaho. This endemic species is considered a hemiparasite (dependent on the health of their surrounding native plant community), and it grows in association with subalpine-meadow and sagebrush habitats. The population may be large (greater than 10,000 individual plants); however, the species is considered to be subject to large variations in annual abundance and an accurate current population estimate is not available. Monitoring indicates that reproductive stems per plant and plant density declined between 1995 and 2007. Fluctuations have occurred since

2007, with slight increases in reproductive output and density in 2008 and decreases in 2009.

The primary threat to the species is the nonnative invasive plant smooth brome (*Bromus inermis*). Despite cooperative Forest Service and Service efforts to control smooth brome in 2007, 2008, and 2009, it still persists in *C. christii* habitats. Other threats to *C. christii* from recreational use and livestock trespass appear to be mostly seasonal and affect only a small portion of the population, and may not occur every year. The magnitude of the threats to this species is moderate at this time because, although the smooth brome control efforts have not eliminated the invasive plant, the Service and Forest Service are continuing their efforts in order to conserve this species. The threat from smooth brome is imminent because the threat still persists at a level that affects the native plant communities that provide habitat for *C. christii.* Thus, we assign an LPN of 8 to this species.

Chamaecrista lineata var. *keyensis* (Big Pine partridge pea)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This pea is endemic to the lower Florida Keys, and restricted to pine rocklands, hardwood hammock edges, and roadsides and firebreaks within these ecosystems. Historically, it was known from Big Pine, Cudjoe, No Name, Ramrod, and Little Pine Keys (Monroe County, Florida). In 2005, a small population was detected on lower Sugarloaf Key, but this population was apparently extirpated later in 2005, due to the effects of Hurricane Wilma. It presently occurs on Big Pine Key, with a very small population on Cudjoe Key. It is fairly well distributed in Big Pine Key pine rocklands, which encompass approximately 580 hectares (1,433 acres), approximately 360 hectares (890 acres) of which are within the Service's National Key Deer Refuge (NKDR). Over 80 percent of the population probably exists on NKDR, with the remainder distributed among State, County, and private properties. Hurricane Wilma (October 2005) resulted in a storm surge that covered most of Big Pine Key with sea water. The surge reduced the population by as much as 95 percent in some areas.

Pine rockland communities are maintained by relatively frequent fires. In the absence of fire, shrubs and trees encroach on pine rockland and this subspecies is eventually shaded out. NKDR has a prescribed fire program, although with many constraints on implementation. Habitat loss due to development was historically the greatest threat to the pea. Much of the remaining habitat is now protected on public lands. Absence of fire now appears to be the greatest of the deterministic threats. Given the recent increase in hurricane activity, storm surges are the greatest of the stochastic threats. The small range and patchy distribution of the subspecies increase risk from stochastic events. Climatic changes and sea level rise are serious long-term threats. Models indicate that even under the best of circumstances, a significant proportion of upland habitat will be lost on Big Pine Key by 2100. Additional threats include restricted range, invasive exotic plants, roadside dumping, loss of pollinators, seed predators, and development.

We maintain the previous assessment that hurricane storm surges, lack of fire, and limited distribution results in a moderate magnitude of threat because a large part of the range is on conservation lands wherein threats are being controlled, although fire management is at much slower rate than is required. The immediacy of hurricane threats is difficult to characterize, but imminence is considered high given that hurricanes (and storm surges) of various magnitudes are frequent and recurrent events in the area. Sea-level rise remains uncontrolled, but overall, is nonimminent. Overall, the threats from limited distribution and inadequate fire management are imminent since they are ongoing. In addition, the most consequential threats (hurricanes, storm surges) are frequent, recurrent, and imminent. Therefore, we retained an LPN of 9 for Big Pine partridge pea.

Chamaesyce deltoidea ssp. *pinetorum* (Pineland sandmat)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The pineland sandmat in only known from Miami-Dade County, Florida. The largest occurrence, estimated at more than 10,000 plants, is located on Long Pine Key within Everglades National Park. All other occurrences are smaller and are in isolated pine rockland fragments in heavily urbanized Miami-Dade County.

Occurrences on private (non-conservation) lands and on one County-owned parcel are at risk from development and habitat degradation and fragmentation. Conditions related to climate change, particularly sea-level rise, will be a factor over the long term. All occurrences of the species are threatened by habitat loss and degradation due to fire suppression, the difficulty of applying prescribed fire, and exotic plants. These threats are severe within small and unmanaged fragments in urban areas. However, the threats of fire suppression and exotics are reduced on lands managed by the National Park Service. Hydrologic changes are considered to be another threat. Hydrology has been altered within Long Pine Key due to artificial drainage, which lowered ground water, and by the construction of roads, which either impounded or diverted water. Regional water management intended to restore the Everglades could negatively affect the pinelands of Long Pine Key in the future. At this time, we do not know whether the proposed restoration and associated hydrological modifications will have a positive or negative effect on pineland sandmat. This narrow endemic may be vulnerable to catastrophic events and natural disturbances, such as hurricanes. Overall, the magnitude of threats to this species is moderate; by applying regular prescribed fire, the National Park Service has kept Long Pine Key's pineland vegetation intact and relatively free of exotic plants, and partnerships are in place to help address the continuing threat of exotics on other pine rockland fragments. Overall, the threats are non-imminent since fire management at the largest occurrence is regularly conducted and sea-level rise and hurricanes are longer-term threats. Therefore, we assigned an LPN of 12 to this subspecies.

Chamaesyce deltoidea ssp. *serpyllum* (Wedge spurge)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Systematic surveys of publicly owned pine rockland throughout this plant's range were conducted during 2005–2006 and 2007–2008 to determine population size and distribution. Wedge spurge is a small prostrate herb. It was historically, and remains, restricted to pine rocklands on Big Pine Key in Monroe County, Florida. Pine rocklands encompass approximately 580 hectares (1,433 acres) on Big Pine Key, approximately 360 hectares (890 acres) of which are within the Service's National Key Deer Refuge (NKDR). Most of the species' range falls within the NKDR, with the remainder on State, County, and private properties. It is not widely dispersed within the limited range. Occurrences are sparser in the southern portion of Big Pine Key, which contains smaller areas of NKDR lands than does the northern portion. Wedge spurge inhabits sites with low woody cover (*e.g.,* low palm and hardwood

densities) and usually, exposed rock or gravel.

Pine rockland communities are maintained by relatively frequent fires. In the absence of fire, shrubs and trees encroach on pine rockland and the subspecies is eventually shaded out. NKDR has a prescribed fire program, although with many constraints on implementation. Habitat loss due to development was historically the greatest threat to the wedge spurge. Much of the remaining habitat is now protected on public lands. Absence of fire now appears to be the greatest of the deterministic threats. Given the recent increase in hurricane activity, storm surges are the greatest of the stochastic threats. The small range and patchy distribution of the subspecies increases risk from stochastic events. Climatic changes and sea-level rise are serious long-term threats. Models indicate that even under the best of circumstances, a significant proportion of upland habitat will be lost on Big Pine Key by 2100. Additional threats include restricted range, invasive exotic plants, roadside dumping, loss of pollinators, seed predators, and development.

We maintain the previous assessment that low fire return intervals plus hurricane-related storm surges, in combination with a limited, fragmented distribution and threats from sea level rise, result in a moderate magnitude of threat, in part, because a large part of the range is on conservation lands, where some threats can be substantially controlled. The immediacy of hurricane threats is difficult to categorize, but in this case threats are imminent given that hurricanes (and storm surges) of various magnitudes are frequent and recurrent events in the area. Sea level rise remains uncontrolled, but over much of the range is nonimminent compared to other prominent threats. Threats resulting from limited fire occurrences are imminent. Since major threats are ongoing, overall, the threats are imminent. Therefore, we retained an LPN of 9 for this subspecies.

Chorizanthe parryi var. *fernandina* (San Fernando Valley spineflower)—The following summary is based on information contained in our files and the petition we received on December 14, 1999. *Chorizanthe parryi* var. *fernandina* is a low-growing herbaceous annual plant in the buckwheat family. Germination occurs following the onset of late-fall and winter rains and typically represents different cohorts from the seed bank. Flowering occurs in the spring, generally between April and June. The plant currently is known from two disjunct localities: The first is in the southeastern portion of Ventura County on a site within the Upper Las Virgenes Canyon Open Space Preserve, formerly known as Ahmanson Ranch, and the second is in an area of southwestern Los Angeles County known as Newhall Ranch. Investigations of historical locations and seemingly suitable habitat within the range of the species have not revealed any other occurrences.

The threats currently facing *Chorizanthe parryi* var. *fernandina* include threatened destruction, modification, or curtailment of its habitat or range, and other natural or manmade factors. The threats to *Chorizanthe parryi* var. *fernandina* from habitat destruction or modification are slightly less than they were 6 years ago. One of the two populations (Upper Las Virgenes Canyon Open Space Preserve) is in permanent, public ownership and is being managed by an agency that is working to conserve the plant; however, the use of adjacent habitat for filming movies was brought to our attention last year; while we are monitoring the situation, we have not yet completed our evaluation of the potential impacts to *Chorizanthe parryi* var. *fernandina.* We will be working with the landowners to manage the site for the benefit of *Chorizanthe parryi* var. *fernandina.* The other population (Newhall Ranch) is under the threat of development; however, a Candidate Conservation Agreement (CCA) is being developed with the landowner, and it is possible that the remaining plants can also be conserved. Until such an agreement is finalized, the threat of development and the potential damage to the Newhall Ranch population still exists, as shown by the destruction of some plants during installation of an agave farm. Furthermore, cattle grazing on Newhall Ranch may be current threat. Cattle grazing may harm *Chorizanthe parryi* var. *fernandina* by trampling and soil compaction. Grazing activity could also alter the nutrient content of the soils *Chorizanthe parryi* var. *fernandina* habitat through fecal inputs, which in turn may favor the growth of other plant species that would otherwise not grow so readily on the mineral-based soils. Over time, changes in species composition may render the sites less favorable for the persistence of *Chorizanthe parryi* var. *fernandina. Chorizanthe parryi* var. *fernandina* may be threatened by invasive nonnative plants, including grasses, which could potentially displace it from available habitat; compete for light, water, and nutrients; and reduce survival and establishment.

Chorizanthe parryi var. *fernandina* is particularly vulnerable to extinction due to its concentration in two isolated areas. The existence of only two areas of occurrence, and a relatively small range, makes the variety highly susceptible to extinction or extirpation from a significant portion of its range due to random events such as fire, drought, erosion, or other occurrences. We retained a listing priority number of 6 for *Chorizanthe parryi* var. *fernandina* due to high magnitude of nonimminent threats.

Chromolaena frustrata (Cape Sable thoroughwort)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is found most commonly in open sun to partial shade at the edges of rockland tropical hammock and in coastal rock barrens. There are nine extant occurrences located on five islands in the Florida Keys and one small area in Everglades National Park (ENP). In the Keys, the plant has been extirpated from half of the islands where it occurred. Prior to Hurricane Wilma in 2005, the population was estimated at roughly 5,000 individuals, with all but 500 occurring on one privately owned island. An estimated 1,500 plants occur on the mainland within ENP.

This species is threatened by habitat loss and modification, even on public lands, and habitat loss and degradation due to threats from exotic plants at almost all sites. The species is vulnerable to natural disturbances, such as hurricanes, tropical storms, and storm surges. While these factors may also work to maintain coastal rock barren habitat in the long term, Hurricane Wilma affected occurrences and habitat, at least in the short term. Occurrences probably initially declined due to inundation of its coastal barren and rockland hammock habitats; long-term effects on this species are unknown. Cape Sable thoroughwort appears to be vulnerable to cold temperatures. It is not known to what extent cold temperatures in January 2010 may have affected the species at most locations, or what, if any, long-term effect this may have on the population. Sea level rise is considered a major threat over the long term. Potential effects from other changes in freshwater deliveries and the construction of the Buttonwood Canal are unknown. Problems associated with small population size and isolation are likely major factors, as occurrences may not be large enough to be viable; this narrowly endemic plant has uncertain viability at most locations. Thus, these factors constitute a high magnitude of threat. The threats of small population size, isolation, and uncertain viability

are imminent because they are ongoing. As a result, we assigned an LPN of 2 to this species.

Consolea corallicola (Florida semaphore cactus)—The following summary is based on information in our files. No new information was provided in the petition we received on May 11, 2004. The Florida semaphore cactus is endemic to the Florida Keys, and was discovered on Big Pine Key in 1919, but that population was extirpated as a result of road building and poaching. This cactus grows close to salt water on bare rock with a minimum of humus soil cover in or along the edges of hammocks near sea level. The species is known to occur naturally only in two areas, Swan Key within Biscayne National Park and Little Torch Key. Outplantings have been attempted in several locations in the upper and lower Keys; however, success has been low. Few plants remain in the population at The Nature Conservancy's Torchwood Hammock Preserve on Little Torch Key. During monitoring work conducted in 2005, a total of 655 plants were documented at the Swan Key population. In 2008 and 2009 the population was estimated by Biscayne National Park staff to consist of approximately 600 individuals. Asexual reproduction is the main life history strategy of this species. Recent genetic studies have shown no variation within populations and very limited variation between populations. Findings support the conclusion that the Swan Key (upper Keys) and Little Torch Key (lower Keys) populations and an individual plant from Big Pine Key (single plant in ex situ collection; lower Keys) are clonally derived. Studies examining the reproductive biology of the species indicate that all extant wild and cultivated plants are male.

The causes for the population decline of this species include destruction or modification of habitat, predation from nonnative *Cactoblastis cactorum* moths and disease, poaching and vandalism, sea level rise, and hurricanes. Sea level rise is considered a serious threat to the species and its habitat; all extant populations are located in low-lying areas. All remaining populations are under threat of predation from the exotic moth and are susceptible to root-rot disease. Competition from invasive exotic plants is a threat at Swan Key; however, efforts by Biscayne National Park are underway to address this threat. This species is inherently vulnerable to stochastic losses, especially at its smaller populations. A lack of variation and limited sexual reproduction makes the remaining small population even more susceptible to natural or manmade factors. Overall, the magnitude of threats is high. The numerous threats are ongoing and therefore, are imminent. Thus, we assigned this species an LPN of 2.

Cordia rupicola (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Cordia rupicola,* a small shrub, has been described from southwestern Puerto Rico, Vieques Island, and Anegada Island (British Virgin Islands). All sites lay within the subtropical dry forest life zone overlying a limestone substrate. *Cordia rupicola* has a restricted distribution. Currently, approximately 226 individuals are known from 3 locations in Puerto Rico: Peñuelas and Guánica Commonwealth Forests and Vieques National Wildlife Refuge. The species is reported as common in Anegada.

This species is threatened by maintenance of trails and power line right-of-ways in the Guánica Commonwealth Forest, residential development in Peñuelas, and residential and commercial development in Anegada Island. This species is also vulnerable to natural (*e.g.,* hurricanes) or manmade (*e.g.,* human-induced fires) threats. Approximately 68 percent of the currently known reproductive adults are located in the Guánica Commonwealth Forest where, due to the difficulty in identifying this species, it is threatened by management and maintenance activities; another 32 percent of the currently known reproductive adults in Puerto Rico are located on privately owned property currently threatened by habitat destruction or modification. For these reasons, we conclude that the magnitude of the current threats is high. The threats this species faces are ones that are likely to increase in the future if conservation measures are not implemented and long-term impacts are not averted. For these reasons, we conclude threats to the species as a whole are nonimminent, and therefore have assigned an LPN of 5.

Cyanea asplenifolia (Haha)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyanea calycina (Haha)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyanea kunthiana (Haha)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyanea lanceolata (Haha)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyanea obtusa (Haha)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyanea tritomantha ('Aku)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Cyanea tritomantha* is a palm-like tree found in *Metrosideros-Cibotium* (ohia-hapuu) montane wet forest on the island of Hawaii, Hawaii. This species is known from 16 populations totaling fewer than 300 individuals. *Cyanea tritomantha* is threatened by feral pigs and cattle that degrade and destroy habitat, and nonnative plants that outcompete and displace it. Potential threats to this species include predation by feral pigs, cattle, rats, and slugs, and human trampling of plants located near trails. Feral pigs and cattle have been fenced out of three outplanted populations of *C. tritomantha,* and nonnative plants have been reduced in the fenced areas; however, there are no efforts to control the ongoing and imminent threats to the remaining populations. The threats continue to be of a high magnitude to *C. tritomantha* because they significantly affect the species resulting in direct mortality or reduced reproductive capacity, leading to a relatively high likelihood of extinction. They are ongoing and therefore imminent for more than 75 percent of the population where no control measures have been implemented. Because the threats continue to be of a high magnitude and are imminent for the unmanaged populations, we retained an LPN of 2 for this species.

Cyrtandra filipes (Haiwale)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyrtandra kaulantha (Haiwale)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyrtandra oxybapha (Haiwale)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Cyrtandra sessilis (Haiwale)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Dalea carthagenensis ssp. *floridana* (Florida prairie-clover)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Dalea carthagenensis* var. *floridana* occurs in Big Cypress National Preserve (BCNP) in Monroe and Collier Counties and at six locations within Miami-Dade County, Florida, albeit mostly in limited numbers. There are a total of nine extant occurrences, seven of which are on conservation lands.

Existing occurrences are extremely small and may not be viable, especially some of the occurrences in Miami-Dade County. Remaining habitats are fragmented. Climatic changes and sea-level rise are long-term threats that are expected to reduce the extent of habitat. This plant is threatened by habitat loss and degradation due to fire suppression, the difficulty of applying prescribed fire to pine rocklands, and threats from exotic plants. Damage to plants by off-road vehicles is a serious threat within the BCNP; damage attributed to illegal mountain biking at the R. Hardy Matheson Preserve has been reduced. One location within BCNP is threatened by changes in mowing practices; this threat is low in magnitude. This species is being parasitized by the introduced insect lobate lac scale (*Paratachardina pseudolobata*) at some localities (e.g., R. Hardy Matheson Preserve), but we do not know the extent of this threat. This plant is vulnerable to natural disturbances, such as hurricanes, tropical storms, and storm surges. Due to its restricted range and the small sizes of most isolated occurrences, this species is vulnerable to environmental (catastrophic hurricanes), demographic (potential episodes of poor reproduction), and genetic (potential inbreeding depression) threats. The magnitude of threats is high because of the limited number of occurrences and the small number of individual plants at each occurrence. The threats are imminent; even though many sites are on conservation lands, these plants still face significant ongoing threats. Therefore, we have assigned an LPN of 3 to this subspecies.

Dichanthelium hirstii (Hirsts' panic grass)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Dichanthelium hirstii* is a perennial grass that produces erect leafy flowering stems from May to October. *Dichanthelium hirstii* occurs in coastal plain intermittent ponds, usually in wet savanna or pine barren habitats and is found at only two sites in New Jersey, one site in Delaware, and one site in North Carolina. While all four extant *D. hirstii* populations are located on public land or privately owned conservation lands, natural threats to the species from encroaching vegetation and fluctuations in climatic conditions remain of concern and may be exacerbated by anthropomorphic factors occurring adjacent to the species' wetland habitat. Given the low numbers of plants found at each site, even minor changes in the species' habitat could result in local extirpation. Loss of any known sites could result in a serious contraction of the species' range. However, the most immediate and severe of the threats to this species (*i.e.,* ditching of the Labounsky Pond site, and encroachment of aggressive vegetative competitors) have been curtailed or are being actively managed by The Nature Conservancy at one New Jersey site and by the Delaware Division of Fish and Wildlife and Delaware Natural Heritage Program at the Assawoman Pond, Delaware site. Based on nonimminent threats of a high magnitude, we retain an LPN of 5 for this species.

Digitaria pauciflora (Florida pineland crabgrass)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Pine rocklands in Miami-Dade County have largely been destroyed by residential, commercial, and urban development and agriculture. With most remaining habitat having been negatively altered, this species has been extirpated from much of its historical range, including extirpation from all areas outside of National Parks. Two large occurrences remain within Everglades National Park and Big Cypress National Preserve; plants on Federal lands are protected from the threat of habitat loss due to development. However, any unknown plants, indefinite occurrences, and suitable habitat remaining on private or non-conservation land are threatened by development. Continued development of suitable habitat diminishes the potential for reintroduction into its historical range. Extant occurrences are in low-lying areas and will be affected by climate change and rising sea level.

Fire suppression, the difficulty of applying prescribed fire to pine rocklands, and threats from exotic plants are ongoing threats. Since the only known remaining occurrences are on lands managed by the National Park Service, the threats of fire suppression and exotics are somewhat reduced. The presence of the exotic Old World climbing fern is of particular concern due to its ability to spread rapidly. In Big Cypress National Preserve, plants are threatened by off-road-vehicle use. Changes to hydrology are a potential threat. Hydrology has been altered within Long Pine Key due to artificial drainage, which lowered ground water, and construction of roads, which either impounded or diverted water. Regional water management intended to restore the Everglades has the potential to affect the pinelands of Long Pine Key, where a large population occurs. At this time, it is not known whether Everglades restoration will have a positive or negative effect. This narrow endemic may be vulnerable to catastrophic events and natural disturbances, such as hurricanes. Overall, the magnitude of threats is high. Only two known occurrences remain and the likelihood of establishing a sizable population on other lands is diminished due to continuing habitat loss. Impacts from climate change and sea level rise are currently low, but expected to be severe in the future. The majority of threats are nonimminent as they are long-term in nature (water management, hurricanes, and sea-level rise). Therefore, we assigned an LPN of 5 for this species.

Echinomastus erectocentrus var. *acunensis* (Acuna cactus)—The following summary is based on information contained in our files and the petition we received on October 30, 2002. The Acuna cactus is known from six sites on well-drained gravel ridges and knolls on granite soils in Sonoran Desert scrub association at 1,300 to 2,000 feet in elevation. Habitat

destruction has been a threat in the past and is a potential future threat to this species. New roads and illegal activities have not yet directly affected the cactus populations at Organ Pipe Cactus National Monument, but areas in close proximity to these known populations have been altered. Cactus populations located in the Florence area have not been monitored and these populations may be in danger of habitat loss due to recent urban growth in the area. Urban development near Ajo, Arizona, as well as that near Sonoyta, Mexico, is a significant threat to the Acuna cactus. Populations of the Acuna cactus within the Organ Pipe Cactus National Monument have shown a 50-percent mortality rate in recent years. The reason(s) for the mortality are not known, but continuing drought conditions are thought to play a role. The Arizona Plant Law and the Convention on International Trade in Endangered Species of Wild Fauna and Flora provide some protection for the Acuna cactus. However, illegal collection is a primary threat to this cactus variety and has been documented on the Organ Pipe Cactus National Monument in the past. The threats continue to be of a high magnitude because drought, as the main threat, severely affects the long-term viability of this variety. The threats are imminent, mainly due to the continued decline of the species, most likely from effects from the ongoing drought. Conditions in 2006 to 2008 worsened, and the drought is prevalent throughout the range of this variety. Therefore, we assigned an LPN of 3 to this cactus variety.

Erigeron lemmonii (Lemmon fleabane)—The following summary is based on information contained in our files and the petition we received in July 1975. The species is known from one site in a canyon in the Fort Huachuca Military Reservation (Fort Huachuca) of southeastern Arizona. In the 1990s, surveys found approximately 450 plants. A survey in 2006 found approximately 950 plants; occupied habitat encompasses about 1 square kilometer. The threats to this species are from catastrophic wildfire in the canyon and on-going drought conditions. We do not know if this species has any adaptations to fire. Due to its location on cliffs, we suspect that fires that may have occurred at more regular intervals and burned at low intensities may have had little to no effect on this species. Lack of fire and the accumulated fuel load that lead to high fire intensity and associated heat may now damage or kill plants on adjacent cliffs, especially near the ground. Plants that are much higher on the cliff face would probably not be affected. The magnitude of threats is moderate rather than high because it is likely that not all of the population would be adversely affected by a wildfire or drought. The threats are still imminent because the likelihood of a fire is high. The LPN for Lemmon fleabane remains an 8 due to moderate, imminent threats.

Eriogonum codium (Umtanum Desert buckwheat)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is a long-lived, slow-growing, woody perennial plant that forms low dense mats. The species occupies a single location on the Hanford National Monument in Washington State. It is found only on an exposed basalt ridge; we do not know if this association is related to the chemical or physical characteristics of the bedrock or other factors. Individual plants may exceed 100 years of age, based on counts of annual growth rings. A count in 1997 reported 5,228 individuals; by 2005 the figure had dropped to 4,418, declining 15 percent over 8 years. In the summer of 2011, another full population census will likely be undertaken, providing a useful measure of change over the last 14 years.

A population viability analysis in 2006 based on 9 years of demographic data estimated that that there is a 72 percent chance of a decline of 50 percent within the next 100 years. Another analysis is expected in 2010, based on 12 years of demographic monitoring.

The major threats to the species are wildfire, firefighting activities, trampling, and invasive weeds. However, the relationship between the decline in population numbers and the known threats is not understood at this time. With the possible exception of wildfire, the observed decline in population numbers and recruitment since 1997 is not directly attributable to the currently known threats. Because the population is small, limited to a single site, and sensitive to fire and disturbance, the species remains vulnerable to the identified threats. The magnitude of threats is high because, given the limited range of the species, any of the threats could adversely affect its continued existence. The threats are ongoing and, therefore, imminent. Because the species continues to remain vulnerable to these threats, we retained an LPN of 2 for this species.

Eriogonum corymbosum var. *nilesii* (Las Vegas buckwheat)—The following summary is based on information contained in our files and the petition we received on April 23, 2008. *Eriogonum corymbosum* var. *nilesii* is a woody perennial shrub up to 4 feet high with a mounding shape. The flowers of this plant are numerous, small, and yellow with small bract-like leaves at the base of each flower. *Eriogonum corymbosum* var. *nilesii* is very conspicuous when flowering in late September and early October. It is restricted to gypsum soil outcroppings in Clark County, Nevada. In 2004, morphometrics (the study of variation and change in the form (size and shape) of organisms) were used to classify this plant as the unique variety *nilesii,* and its unique taxonomy was verified using molecular genetic analyses in 2007.

Eriogonum corymbosum var. *nilesii* was added to the candidate list in December 2007 due to continued loss of habitat from development of over 95 percent of its core historical range and potential habitat. In addition, off-highway vehicle activity and other public-land uses (casual public use, mining, and illegal dumping) directly threaten over 95 percent of the remaining habitat. It was petitioned for listing in April 2008 and a warranted-but-precluded determination was made in December 2008. To date, regulatory mechanisms to protect *E. corymbosum* var. *nilesii* are inadequate. Its designation as a Bureau of Land Management (BLM) special status species has not provided adequate protection on lands managed by BLM. *Eriogonum corymbosum* var. *nilesii* is not protected by the State of Nevada or any other regulatory mechanisms on other Federal lands. We have determined that candidate status is warranted for this variety as a result of threats to the remaining habitat and inadequate regulatory mechanisms. Conservation measures are being developed that could reduce the risks to occupied habitat, but these measures are not sufficiently complete as to remove these threats. The magnitude of threats is high since the more significant threats (urban development and surface mining) would result in direct mortality of the plants in over half of the known habitat. While both development and mining are very likely to occur in the future, they are not expected to happen in the immediate future, and thus, the threats are nonimminent. Accordingly, we assigned *E. corymbosum* var. *nilesii* an LPN of 6.

Eriogonum kelloggii (Red Mountain buckwheat)—The following summary is based on information contained in our files and information provided by the California Department of Fish and

Game. No new information was provided in the petition we received on May 11, 2004. Red Mountain buckwheat is a perennial herb endemic to serpentine habitat of lower montane forests found between 1,900 and 4,100 feet. Its distribution is limited to the Red Mountain and Little Red Mountain areas of Mendocino County, California, where it occupies in excess of 81 acres, and 900 square feet, respectively. Occupied habitat at Red Mountain is scattered over 4 square miles. Total population size has not been determined, but a preliminary estimate suggests the population may be in excess of 63,000 plants, occupying more than 44 discrete habitat polygons. Intensive monitoring of permanent plots on three study sites in Red Mountain suggests considerable annual variation in plant density and reproduction, but no discernable population trend was evident in two of three study sites. One study site showed a 65-percent decline in plant density over 11 years.

The primary threat to this species is the potential for surface mining for chromium and nickel. Virtually the entire distribution of Red Mountain buckwheat is either owned by mining interests, or is covered by existing mining claims, none of which are currently active. Surface mining would destroy habitat suitability for this species. The species is also believed threatened by tree and shrub encroachment into its habitat, due to the absence of fire. Some 42 percent of its known distribution occurred within the boundary of the Red Mountain Fire of June, 2008. However, the extent and manner in which *Eriogonum kelloggii* and its habitat were affected by that fire is not yet known. The single population located at Little Red Mountain appears to have been affected, and perhaps eliminated by fire-control efforts. The known species distribution by ownership is described as follows: Federal (Bureau of Land Management), 83 percent; private, 17 percent; State of California, less than 1 percent. Given the magnitude (high) and immediacy (nonimminent) of the threat to the small, scattered populations, and its taxonomy (species), we assigned a listing priority number of 5 to this species.

Festuca hawaiiensis (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is a cespitose (growing in dense, low tufts) annual found in dry forest on the island of Hawaii, Hawaii. *Festuca hawaiiensis* is known from 4 populations totaling approximately 1,000 individuals in and around the Pohakuloa Training Area. Historically, this species was also found on Hualalai and Puu Huluhulu, but it no longer occurs at these sites.

Festuca hawaiiensis is threatened by pigs, goats, mouflon, and sheep that degrade and destroy habitat; fire; military training activities; and nonnative plants that outcompete and displace it. Feral pigs, goats, mouflon, and sheep have been fenced out of a portion of the populations of *F. hawaiiensis,* and nonnative plants have been reduced in the fenced area, but the majority of the populations are still affected by threats from ungulates. The threats are imminent because they are not controlled and are ongoing in the remaining, unfenced populations. Firebreaks have been established at two populations, but fire is an imminent threat to the remaining populations that have no firebreaks. The threats are of a high magnitude because they could adversely affect the majority of *F. hawaiiensis* populations resulting in direct mortality or reduced reproductive capacity, leading to a relatively high likelihood of extinction. Therefore, we retained an LPN of 2 for this species.

Festuca ligulata (Guadalupe fescue)—The following summary is based on information obtained from the original species petition, received in 1975, and from our files, on-line herbarium databases, and scientific publications. Six small populations of Guadalupe fescue, a member of the Poaceae (grass family), have been documented in mountains of the Chihuahuan desert in Texas and in Coahuila, Mexico. Only two extant populations have been confirmed in the last 5 years, in the Chisos Mountains, Big Bend National Park, Texas, and in the privately owned *Area de Protección de Flora y Fauna* (Protected Area for Flora and Fauna—APFF) Maderas del Carmen in northern Coahuila. Despite intensive searches, a population known from Guadalupe Mountains National Park in Texas has not been found since 1952 and is presumed extirpated. In 2009, Mexican botanists confirmed Guadalupe fescue at one site in APFF Maderas del Carmen, but could not find the species at the original site, known as Sierra El Jardín, which was first reported in 1973. Two additional Mexican populations, near Fraile in southern Coahuila, and the Sierra de la Madera in central Coahuila, have not been monitored since 1941 and 1977, respectively. A great amount of potentially suitable habitat in Coahuila has never been surveyed. The potential threats to Guadalupe fescue include changes in the wildfire cycle and vegetation structure, trampling from humans and pack animals, grazing, trail runoff, fungal infection of seeds, small sizes and isolation of populations, and limited genetic diversity. The Service and the National Park Service established a Candidate Conservation Agreement in 2008 to provide additional protection for the Chisos Mountains population, and to promote cooperative conservation efforts with U.S. and Mexican partners. The threats to Guadalupe fescue are of moderate magnitude, and are not imminent, due to the provisions of the Candidate Conservation Agreement and other conservation efforts, as well as the likelihood that other populations exist in mountains of Coahuila that have not been surveyed. Thus, we maintained the LPN of 11 for this species.

Gardenia remyi (Nanu)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Gardenia remyi* is a tree found in mesic to wet forest on the islands of Kauai, Molokai, Maui, and Hawaii, Hawaii. *Gardenia remyi* is known from 19 populations totaling between 85 and 87 individuals.

This species is threatened by pigs, goats, and deer that degrade and destroy habitat and possibly prey upon the species, and by nonnative plants that outcompete and displace it. *Gardenia remyi* is also threatened by landslides on the island of Hawaii. This species is represented in ex situ collections. Feral pigs have been fenced out of the west Maui populations of *G. remyi,* and nonnative plants have been reduced in those areas. However, these threats are not controlled and are ongoing in the remaining, unfenced populations, and are, therefore, imminent. In addition, the threat from goats and deer is ongoing and imminent throughout the range of the species, because no goat or deer control measures have been undertaken for any of the populations of *G. remyi.* All of the threats are of a high magnitude because habitat destruction, predation, and landslides could significantly affect the entire species, resulting in direct mortality or reduced reproductive capacity, leading to a relatively high likelihood of extinction. Therefore, we retained an LPN of 2 for this species.

Geranium hanaense (Nohoanu)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Geranium hillebrandii (Nohoanu)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Gonocalyx concolor (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Gonocalyx concolor* is a small evergreen epiphytic or terrestrial shrub. Currently, *G. concolor* is known from two populations in Puerto Rico: One at Cerro La Santa and the other at Charco Azul, both in the Carite Commonwealth Forest. The forest is located in the Sierra de Cayey and extends through the municipalities of Guayama, Cayey, Caguas, San Lorenzo, and Patillas in southeastern Puerto Rico. The population previously reported in the Caribbean National Forest is apparently no longer extant. In 1996, approximately 172 plants were reported at Cerro La Santa. However, in 2006 only 25 individuals were reported at Cerro La Santa and 4 individuals located at Charco Azul.

The species is currently threatened by habitat disturbance related to the maintenance of existing telecommunication facilities at Cerro La Santa, limited distribution (2 sites) and low population numbers (less than 30 individuals total), and hurricanes. Although the species is located in the Carite Commonwealth Forest, a public forest managed by DNER, applicable laws and regulations are not effectively enforced and Service personnel has documented damages to the population located adjacent to existing communication towers at the forest. Because of extremely low population numbers and the vulnerability to current threats (maintenance activities and hurricanes), the magnitude of current threats on the species is high. Overall, threats are nonimminent since *G. concolor* is only known from the Carite Commonwealth Forest, administered and managed by the DNER for conservation and recreation. Therefore, we have assigned a listing priority number of 5 for the *Gonocalyx concolor.*

Hazardia orcuttii (Orcutt's hazardia)—The following summary is based on information contained in our files and the petition we received on March 8, 2001. *Hazardia orcuttii* is an evergreen shrubby species in the Asteraceae (sunflower family). The erect shrubs are 50–100 centimeters (20–40 inches) high. The only known extant native occurrence of this species in the U.S. is in the Manchester Conservation Area in northwestern San Diego County, California. This site is managed by Center for Natural Lands Management (CNLM). Using material derived from the native population, the CNLM facilitated the establishment of test populations at five additional sites in northwest San Diego County, California, including a second site in the Manchester Conservation Area, Kelly Ranch Habitat Conservation Area, Rancho La Costa Habitat Conservation Area, San Elijo Lagoon, and San Diego Botanical Garden. *Hazardia orcuttii* also occurs at a few coastal sites in Mexico, where it has no conservation protections. The total number of plants at the only native site in the United States is approximately 668 native adult plants and 50 seedlings. The five additional test populations collectively support approximately 500 adult plants and 350 seedlings.

The population in Mexico is estimated to be 1300 plants. The occurrences in Mexico are threatened by coastal development from Tijuana to Ensenada. The native population in the U.S. is within an area that receives public use; however, management at this site has minimized impacts from trampling, dumping, and other unintentionally destructive impacts. This species has a very low reproductive output, although the causes are as-yet unknown. Competition from invasive nonnative plants may pose a threat to the reproductive potential of this species. In one study, 95 percent of the flowers examined were damaged by insects or fungal agents or aborted prematurely, and insects or fungal agents damaged 50 percent of the seeds produced. All of the populations in the U.S. are small and two of the test populations are declining. Small populations are considered subject to random events and reductions in fitness due to low genetic variability. Threats associated with small population size are further exacerbated by the limited range and low reproductive output of this species. However, if low seed production is because of ecosystem disruptions, such as loss of effective pollinators, there could be additional threats that need to be addressed. Overall, the threats to *Hazardia orcuttii* are of a high magnitude because they have the potential to significantly reduce the reproductive potential of this species. The threats are nonimminent overall because the most significant threats (invasive, nonnative plants and low reproductive output) are nonimminent and long-term in nature. This species faces high-magnitude nonimminent threats; therefore, we assigned this species a listing priority of 5.

Hedyotis fluviatilis (Kamapuaa)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Hedyotis fluviatilis* is a scandent shrub found in mixed shrubland to wet lowland forest on the islands of Oahu and Kauai, Hawaii. This species is known from 11 populations totaling between 400 and 900 individuals. *Hedyotis fluviatilis* is threatened by pigs and goats that degrade and destroy habitat, and by nonnative plants that outcompete and displace it. Landslides are a potential threat to populations on Kauai. Predation by pigs and goats is a likely threat. This species is represented in an ex situ collection; however, there are no other conservation actions implemented for this species. We retained an LPN of 2 because the severity of the threats to the species is high and the threats are ongoing and, therefore, imminent.

Helianthus verticillatus (Whorled sunflower)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The whorled sunflower is found in moist, prairie-like openings in woodlands and along adjacent creeks. Despite extensive surveys throughout its range, only five populations are known for this species. There are two populations documented for Cherokee County, Alabama; one population in Floyd County, Georgia; and one population each in Madison and McNairy Counties, Tennessee. This species appears to have restricted ecological requirements and is dependent upon the maintenance of prairie-like openings for its survival. Active management of habitat is needed to keep competition and shading under control. Much of its habitat has been degraded or destroyed for agricultural, silvicultural, and residential purposes. Populations near roadsides or powerlines are threatened by herbicide usage in association with right-of-way maintenance. The majority of the Georgia population is protected due to its location within a conservation easement; however, only 15 to 20 plants are estimated to occur at this site. The remaining four sites are not formally protected, but efforts have been taken to abate threats associated with highway right-of-way maintenance at one Alabama population; and, despite past concerns about threats from timber removal degrading *H. verticillatus*

habitat, the other Alabama population has responded favorably to canopy removal that took place circa 2001. Therefore, threats are of moderate magnitude, though imminent because they are ongoing. Thus, we assigned this species an LPN of 8.

Hibiscus dasycalyx (Neches River rose-mallow)—See above in "*Listing Priority Changes in Candidates*." The above summary is based on information contained in our files.

Ivesia webberi (Webber ivesia)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ivesia webberi* is a low, spreading, perennial herb that occurs very infrequently in Lassen, Plumas, and Sierra Counties in California, and in Douglas and Washoe Counties, Nevada. The species is restricted to sites with sparse vegetation and shallow, rocky soils composed of volcanic ash or derived from andesitic rock (a gray, fine-grained volcanic rock). Occupied sites generally occur on mid-elevation flats, benches, or terraces on mountain slopes above large valleys along the transition zone between the eastern edge of the northern Sierra Nevada and the northwestern edge of the Great Basin. Currently, the global population is estimated at approximately 5 million individuals at 16 known sites. The Nevada sites support nearly 98 percent of the total number of individuals (4.9 million) on about 27 acres (11 hectares) of occupied habitat. The California sites are larger in area, totaling about 157 acres (63 hectares), but support fewer individuals (approximately 120,000).

The primary threats to *I. webberi* include urban development, authorized and unauthorized roads, off-road-vehicle activities and other dispersed recreation, livestock grazing and trampling, fire and fire suppression activities including fuels reduction and prescribed fires, and displacement by noxious weeds. Despite the high numbers of individuals, observations in 2002 and 2004 confirmed that direct and indirect impacts to the species and its habitat, specifically from urban development and off-highway-vehicle activity remain high and are likely to increase. However, the U.S. Forest Service has developed a conservation strategy that commits to management, monitoring, and research to protect this species on National Forest lands where most populations are found, and the State of Nevada has listed the species as critically endangered, which provides a mechanism to track future impacts on private lands. In addition, both the U.S. Forest Service and State of Nevada have agreed to coordinate closely with the Fish and Wildlife Service on all activities that may affect this species. In light of these conservation commitments, we have determined that the threats to *I. webberi* are nonimminent and are maintaining the LPN of 5.

Joinvillea ascendens ssp. *ascendens* (Ohe)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Joinvillea ascendens* ssp. *ascendens* is an erect herb found in wet to mesic *Metrosideros polymorpha-Acacia koa* (ohia-koa) lowland and montane forest on the islands of Kauai, Oahu, Molokai, Maui, and Hawaii, Hawaii. This subspecies is known from 43 widely scattered populations totaling fewer than 200 individuals. Plants are typically found as only one or two individuals, with miles between populations. This subspecies is threatened by destruction or modification of habitat by pigs, goats, and deer, and by nonnative plants that outcompete and displace native plants. Predation by pigs, goats, deer, and rats is a likely threat to this species. Landslides are a potential threat to populations on Kauai and Molokai. Seedlings have rarely been observed in the wild. Seeds germinate in cultivation, but most die soon thereafter. It is uncertain if this rarity of reproduction is typical of this subspecies, or if it is related to habitat disturbance. Feral pigs have been fenced out of a few of the populations of this subspecies, and nonnative plants have been reduced in those populations that are fenced. However, these threats are not controlled and are ongoing in the remaining, unfenced populations. This species is represented in ex situ collections. The threats are of high magnitude because habitat degradation, nonnative plants, and predation result in mortality or severely affect the reproductive capacity of the majority of populations of this species, leading to a relatively high probability of extinction. The threats are ongoing, and thus are imminent. Therefore, we retained an LPN of 3 for this subspecies.

Korthalsella degeneri (Hulumoa)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Leavenworthia crassa (Gladecress)—The following information is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species of gladecress is a component of glade flora, occurring in association with limestone outcroppings. *Leavenworthia crassa* is endemic to a 13-mile radius area in north central Alabama in Lawrence and Morgan Counties, where only six populations of this species are documented. Glade habitats today have been reduced to remnants fragmented by agriculture and development. Populations of this species are now located in glade-like areas exhibiting various degrees of disturbance including pastureland, roadside rights-of-way, and cultivated or plowed fields. The most vigorous populations of this species are located in areas which receive full, or near full, sunlight with limited herbaceous competition. The magnitude of threat is high for this species, because with the limited number of populations, the threats could result in direct mortality or reduced reproductive capacity of the species, leading to a relatively high likelihood of extinction. This species appears to be able to adjust to periodic disturbances and the potential impacts to populations from competition, exotics, and herbicide use are nonimminent. Thus, we assigned an LPN of 5 to this species.

Leavenworthia texana (Texas golden gladecress)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Leavenworthia texana* occurs only on the Weches outcrops of east Texas in San Augustine and Sabine counties. The Weches geologic formation consists of a layer of calcareous sediment, lying above a layer of glauconite clay deposited up to 50 million years ago. Erosion of this complex has produced topography of steep, flat-topped hills and escarpments, as well as the unique ecology of Weches glades: Islands of thin, loamy, seepy, alkaline soils that support open-sun, herbaceous, and highly diverse and specialized plant communities.

Leavenworthia texana was historically recorded at eight sites, all in a narrow region along north San Augustine and Sabine Counties. All sites are on private land. Three sites have been lost to glauconite mining and two sites are currently closed to visitors. The Sabine County site supported 1,000 plants within 9 square meters (97 square feet) in 2007. The Tiger Creek site in San Augustine County (less than 0.1 hectare (.2 acre) in size) was found to have about 200 plants in 2007. The Kardell site (less than 9 square meters (97 square feet)) has supported 400–500 plants in past years, but none in 2005.

An introduced population in Nacogdoches County numbered about 1,000 within an area of about 18 square meters (194 square feet) in 2007.

Historical habitat has been affected by highway construction, residential development, conversion to pasture and cropland, widespread use of herbicide, overgrazing, and glauconite mining. However, the primary threat to existing *Leavenworthia texana* populations is the invasion of nonnative and weedy shrubs and vines (primarily Macartney rose (*Rosa bracteata*) and Japanese honeysuckle (*Lonicera japonica*). All known sites are undergoing severe degradation by the incursion of nonnative shrubs and vines, which restrict both growth and reproduction of the gladecress. Brushclearing carried out in 1995 resulted in the reappearance of *L. texana* after a 10-year absence at one site. However, nonnative shrubs have again invaded this area. More effective control measures, such as burning and selective herbicide use, need to be tested and monitored. The small number of known sites also makes *L. texana* vulnerable to extreme natural disturbance events. A severe drought in 1999 and 2000 had a pronounced adverse effect on *L. texana* reproduction. Since the threat from nonnative plants severely affects all known sites, the magnitude is high. The threats are imminent since they are ongoing. Therefore, we retain an LPN of 2 for *L. texana.*

Lesquerella globosa (Desvaux) Watson (Short's bladderpod)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Short's bladderpod is a perennial member of the mustard family that occurs in Indiana (1 location), Kentucky (6 locations), and Tennessee (22 locations). It grows on steep, rocky, wooded slopes; on talus areas; along cliff tops and bases; and on cliff ledges. It is usually associated with south to west facing calcareous outcrops adjacent to rivers or streams. Road construction and road maintenance have played a significant role in the decline of *L. globosa.* Specific activities that have affected the species in the past and may continue to threaten it include bank stabilization, herbicide use, mowing during the growing season, grading of road shoulders, and road widening or repaving. Sediment deposition during road maintenance or from other activities also potentially threatens the species. Because the natural processes that maintained habitat suitability and competition from invasive nonnative vegetation have been interrupted at many locations, active habitat management is necessary at those sites. While threats associated with roadside maintenance activities and habitat alterations by invasive plant encroachment are imminent because they are ongoing, this threat is of moderate magnitude as they are not affecting all locations of this species at this time. Therefore, we assigned an LPN of 8 to this species.

Linum arenicola (Sand flax)—See above in "*Listing Priority Changes in Candidates.*" That summary is based on information contained in our files.

Linum carteri var. *carteri* (Carter's small-flowered flax)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This plant occupies open and disturbed sites in pinelands of Miami-Dade County, Florida. Currently, there are nine known occurrences. Occurrences with fewer than 100 individuals are located on 3 county-owned preserves. A site with more than 100 plants is owned by the U.S. government, but the site is not managed for conservation.

Climatic changes and sea level rise are long-term threats that will likely reduce the extent of habitat. The nine existing occurrences are small and vulnerable to habitat loss, which is exacerbated by habitat degradation due to fire suppression, the difficulty of applying prescribed fire to pine rocklands, and threats from exotic plants. Remaining habitats are fragmented. Non-compatible management practices are also a threat at most protected sites; several sites are mowed during the flowering and fruiting season. In the absence of fire, periodic mowing can, in some cases, help maintain open, shrub-free understory and provide benefits to this plant. However, mowing can also eliminate reproduction entirely in very young plants, delay reproductive maturation, and kill adult plants. With flexibility in timing and proper management, threats from mowing practices can be reduced or negated. Carter's small-flowered flax is vulnerable to natural disturbances, such as hurricanes, tropical storms, and storm surges. This species exists in such small numbers at so few sites, that it may be difficult to develop and maintain viable occurrences on the available conservation lands. Although no population viability analysis has been conducted for this plant, indications are that existing occurrences are at best marginal, and it is possible that none are truly viable. As a result, the magnitude of threats is high. The threats are ongoing, and thus are imminent. Therefore, we assigned an LPN of 3 to this plant variety.

Melicope christophersenii (Alani)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Melicope hiiakae (Alani)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Melicope makahae (Alani)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Myrsine fosbergii (Kolea)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Myrsine fosbergii* is a branched shrub or small tree found in lowland mesic and wet forest, on watercourses or stream banks, on the islands of Kauai and Oahu, Hawaii. This species is currently known from 14 populations totaling a little more than 100 individuals. *Myrsine fosbergii* is threatened by feral pigs and goats that degrade and destroy habitat and may prey upon the plant, and by nonnative plants that compete for light and nutrients. This species is represented in an ex situ collection. Although there are plans to fence and remove ungulates from the Helemano area of Oahu, which may benefit this species, no conservation measures have been taken to date to alleviate these threats for this species. Feral pigs and goats are found throughout the known range of *M. fosbergii,* as are nonnative plants. The threats from feral pigs, goats, and nonnative plants are of a high magnitude because they pose a severe threat throughout the limited range of this species, and they are ongoing and therefore imminent. We retained an LPN of 2 for this species.

Myrsine vaccinioides (Kolea)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Narthecium americanum (Bog asphodel)—The following summary is

based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Bog asphodel is a perennial herb that is found in savanna areas, usually with water moving through the substrate, as well as in sandy bogs along streams and rivers. The historical range of bog asphodel included New York, New Jersey, Delaware, North Carolina, and South Carolina, although the taxonomic identity of the historic North Carolina specimens is now in question. Extant populations of bog asphodel are now only found within the Pine Barrens region of New Jersey.

Curtailment of its historical range is a primary threat to bog asphodel, representing a loss of habitat and genetic diversity and leaving the species vulnerable to localized threats, natural disasters, and climate change. The Pine Barrens savannas that support bog asphodel provide a scarce, specialized habitat that has declined from several thousand acres around 1900 to only a thousand acres in recent decades. This species has been lost from at least 3 States, and now occurs on less than 80 acres of land confined to an area only about 30 miles in diameter. Of the 14 New Jersey watersheds that historically supported bog asphodel, the species is extirpated from six watersheds and persists in four additional watersheds only as a single occurrence. The 4 remaining watersheds are unevenly distributed among the 3 river systems supporting the species, with nearly 88 percent of bog asphodel (by area) concentrated in the greater Mullica River drainage.

Other significant threats include unauthorized use of off-road vehicles, future increases in water extraction for human use, natural succession possibly accelerated by fire suppression, and potentially climate change. Lesser threats include indirect effects of upland development, impacts from recreational activities, collection, herbivory, and beaver activity. Because the range of bog asphodel is currently limited to New Jersey's Pinelands Area and Coastal Zone, regulatory protections are generally adequate. More than 75 percent of bog asphodel occurs on protected lands, although enforcement of illegal activity can be lacking. Outright habitat destruction from wetland filling, draining, flooding, and conversion to commercial cranberry bogs likely contributed to the curtailment of this species' range, but these historical threats to bog asphodel are generally no longer occurring.

Current threats to bog asphodel are low to moderate in magnitude. Several threats are imminent because they are ongoing and expected to continue. Overall, based on these imminent, moderate threats, we retain a listing priority number of 8 for this species.

Nothocestrum latifolium ('Aiea)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Nothocestrum latifolium* is a small tree found in dry to mesic forest on the islands of Kauai, Oahu, Maui, Molokai, and Lanai, Hawaii. *Nothocestrum latifolium* is known from 17 steadily declining populations totaling fewer than 1,200 individuals.

This species is threatened by feral pigs, goats, and axis deer that degrade and destroy habitat and may prey upon it; by nonnative plants that compete for light and nutrients; and by the loss of pollinators that negatively affect the reproductive viability of the species. This species is represented in an ex situ collection. Ungulates have been fenced out of four areas where *N. latifolium* currently occurs, and nonnative plants have been reduced in some populations that are fenced. However, these ongoing conservation efforts for this species benefit only a few of the known populations. The threats are not controlled and are ongoing in the remaining unfenced populations. In addition, little regeneration is observed in this species. The threats are of a high magnitude, since they are severe enough to affect the continued existence of the species, leading to a relatively high likelihood of extinction. The threats are imminent, since they are ongoing. Therefore, we retained an LPN of 2 for this species.

Ochrosia haleakalae (Holei)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ochrosia haleakalae* is a tree found in dry to mesic forest, often on lava, on the islands of Hawaii and Maui, Hawaii. This species is currently known from 8 populations totaling between 64 and 76 individuals.

Ochrosia haleakalae is threatened by fire; by feral pigs, goats, and cattle that degrade and destroy habitat and may directly prey upon it; and by nonnative plants that compete for light and nutrients. This species is represented in ex situ collections. Feral pigs, goats, and cattle have been fenced out of one wild and one outplanted population on private lands on the island of Maui and one outplanted population in Hawaii Volcanoes National Park on the island of Hawaii. Nonnative plants have been reduced in the fenced areas. The threat from fire is of a high magnitude and imminent because no control measures have been undertaken to address this threat that could adversely affect *O. haleakalae* as a whole. The threats from feral pigs, goats, and cattle are ongoing to the unfenced populations of *O. haleakalae.* The threat from nonnative plants is ongoing and imminent and of a high magnitude to the wild populations on both islands as this threat adversely affects the survival and reproductive capacity of the majority of the species, leading to a relatively high likelihood of extinction. Therefore, we retained an LPN of 2 for this species.

Pediocactus peeblesianus var.*fickeiseniae* (Fickeisen plains cactus)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Pediocactus peeblesianus* var. *fickeiseniae* is a small cactus known from the Gray Mountain vicinity to the Arizona strip in Coconino, Navajo, and Mohave Counties, Arizona. The cactus grows on exposed layers of Kaibab limestone on canyon margins and well-drained hills in Navajoan desert or grassland. In 1999, the Arizona Game and Fish Department noted 23 occurrences for the species, including historical ones. The species is located on Bureau of Land Management (BLM), U.S. Forest Service, tribal, and possibly State lands. Recent reports from the BLM and Navajo Nation describe populations of the species as being in decline. The main human-induced threats to this cactus are activities associated with road maintenance, off-road vehicles, and trampling associated with livestock grazing. Monitoring data has detected mortality associated with livestock grazing. Illegal collection of this species has been noted in the past, but we do not know if it is a continuing threat. The populations that have been monitored have been affected, in part, by the continuing drought. There has been very low recruitment, and rabbits and rodents have consumed adult plants because there is reduced forage available during these dry conditions. Given that there are only a few known populations, that the range of this taxon is limited, and that the majority of the known populations on BLM lands and the Navajo Nation are experiencing declines, we conclude that the threats are of a high magnitude. The threats are ongoing and, therefore, are imminent. Thus, we have retained an LPN of 3 for this plant variety.

Penstemon scariosus var. *albifluvis* (White River beardtongue)—See above in "*Listing Priority Changes in Candidates*." That summary is based on information contained in our files.

Peperomia subpetiolata ('Ala 'ala wai nui)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Phyllostegia bracteata (no common name)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Phyllostegia floribunda (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is an erect subshrub found in mesic to wet forest on the island of Hawaii, Hawaii. This species is known from 7 populations totaling fewer than 25 individuals. *Phyllostegia floribunda* is threatened by feral pigs that degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. This species is represented in ex situ collections. The National Park Service, The Nature Conservancy, and the State have fenced and outplanted more than 170 individuals at Olaa Forest Reserve, Kona Hema, and Waiakea Forest Reserve (more than 50, 20 individuals, and 100 individuals, respectively). Nonnative plants have been reduced in these fenced areas. However, no conservation efforts have been implemented for the unfenced populations. Overall, the threats are moderate because conservation efforts for over half of the populations reduce the severity of the threats. The threats are ongoing in the unfenced portions and must be constantly managed in the fenced portions. Therefore, the threats are imminent. We retained an LPN of 8 because the threats are of moderate magnitude and are imminent for the majority of the populations.

Physaria douglasii ssp. *tuplashensis* (White Bluffs bladder-pod)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. White Bluffs bladder-pod is a low-growing, herbaceous, short-lived, perennial plant in the Brassicaceae (mustard) family. Historically and currently, White Bluffs bladder-pod is only known from a single population that occurs along the White Bluffs of the Columbia River in Franklin County, Washington. The entire range of the species is a narrow band, approximately 33 feet (10 meters) wide by 10.6 miles (17 kilometers) long, at the upper edge of the bluffs. The species occurs only on cemented, highly alkaline, calcium carbonate paleosol (a "caliche" soil) and is believed to be a "calciphile."

Approximately 35 percent of the known range of the species has been moderately to severely affected by landslides, an apparently permanent destruction of the habitat. The entire population of the species is down-slope of irrigated agricultural land, the source of the water seepage causing the mass failures and landslides, but the southern portion of the population is the closest to the agricultural land and the most affected by landslides. Other significant threats include use of the habitat by recreational off-road vehicles which destroys plants, and the presence of invasive nonnative plants that compete with *P. douglasii tuplashensis* for resources (light, water, nutrients). Additionally, the increasing presence of invasive nonnative plants may alter fire regimes and potentially increase the threat of fire to the *P. douglasii tuplashensis* population. The threats to the population from landslides and the recreational off-road-vehicle use are currently occurring and will continue to occur in the future. In addition, invasion by nonnative plants is currently occurring, and with the 2007 fire that occurred in the area of the existing population, invasive plants will likely spread or increase throughout the burned area of the population. We have therefore determined that these threats are imminent. Although approximately 35 percent of the population is severely affected by landslides in the southern portion of the range, the likelihood of the persistence of the population in the unaffected northern portion appears to be fairly high. Currently, we know of no plans to expand or significantly modify the existing agriculture activities in areas adjacent to the population. In addition, deliberate modification of the species' immediate habitat is unlikely due to its location and ownership (85 percent federal). Intermittent use of off-road vehicles does occur on the Monument, although it is prohibited. These activities are mainly confined to the upper portion of the White Bluffs where few *P. douglasii tuplashensis* plants occur, so there is low to moderate threat to the species from these activities. Invasive plants are present in the vicinity, but have not yet been determined to be a significant problem. As a result of the 2007 fire, there is a higher probability that invasion of these nonnatives will occur. While *P. douglasii tuplashensis* is inherently vulnerable because it is a narrow endemic, the magnitude of the ongoing threats to the population is moderate; therefore we retain an LPN of 9 for this species.

Platanthera integrilabia (Correll) Leur (White fringeless orchid)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Platanthera integrilabia* is a perennial herb that grows in partially, but not fully, shaded, wet, boggy areas at the head of streams and on seepage slopes in Alabama, Georgia, Kentucky, Mississippi, South Carolina and Tennessee. Historically, there were at least 90 populations of *P. integrilabia.* It is presumed extirpated from North Carolina and Virginia. Currently there are about 50 extant sites supporting the species.

Several populations have been destroyed due to road, residential, and commercial construction, and to projects that altered soil and site hydrology such that suitability for the species was reduced. Several of the known populations are in or adjacent to powerline rights-of-way. Mechanical clearing of these areas may benefit the species by maintaining adequate light levels; however, the indiscriminant use of herbicides in these areas could pose a significant threat to the species. All-terrain vehicles have damaged several sites and pose a threat at most sites. Most of the known sites for the species occur in areas that are managed specifically for timber production. Timber management is not necessarily incompatible with the protection and management of the species, but care must be taken during timber management to ensure the hydrology of bogs supporting the species is not altered. Natural succession can result in decreased light levels. Because of the species dependence upon moderate-to-high light levels, some type of active management to prevent complete canopy closure is required at most locations. Collecting for commercial and other purposes is a potential threat. Herbivory (primarily deer) threatens the species at several sites. Due to the alteration of habitat and changes in natural conditions, protection and recovery of this species is dependent upon active management rather than just preservation of habitat. Invasive, nonnative plants such as Japanese honeysuckle and kudzu also threaten several sites. The threats are widespread; however, the impact of those threats on the species survival is moderate in magnitude. Several of the sites are protected to some degree from

the threats by being within State parks, national forests, wildlife management areas, or other protected land. The threats however are imminent since they are ongoing, and we have therefore assigned an LPN of 8 to this species.

Platydesma cornuta var. *cornuta* (no common name)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Platydesma cornuta var. *decurrens* (no common name)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Platydesma remyi (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Platydesma remyi* is a shrub or shrubby tree found in wet forests on old volcanic slopes on the island of Hawaii, Hawaii. This species is known from 2 populations totaling fewer than 50 individuals. *Platydesma remyi* is threatened by feral pigs and cattle that degrade and destroy habitat, nonnative plants that compete for light and nutrients, reduced reproductive vigor, and stochastic extinction due to naturally occurring events. This species is represented in an ex situ collection, and by one individual included in a rare plant exclosure in the Laupahoehoe Natural Area Reserve. The threats are ongoing and therefore imminent, and of a high magnitude because of their severity; the threats cause direct mortality or significantly reduce the reproductive capacity of the species throughout its limited range, leading to a relatively high likelihood of extinction. Therefore, we retained an LPN of 2 for this species.

Pleomele forbesii (Hala pepe)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Potentilla basaltica (Soldier Meadow cinquefoil or basalt cinquefoil)—The following summary is based on information contained in our files; the petition we received on May 11, 2004, provided no additional information on the species. *Potentilla basaltica* is a low growing, rhizomatous, herbaceous perennial that is associated with alkali meadows, seeps, and occasionally marsh habitats bordering perennial thermal springs, outflows, and meadow depressions. In Nevada, the species is known only from Soldier Meadow in Humboldt County. In northeastern California, a single population occurs in Lassen County. At Soldier Meadow, there are 11 discrete known occurrences within an area of about 24 acres (9.6 hectares) that support about 130,000 individuals. The California population occurs on private and public land and supports fewer than 1,000 plants. The public land has been designated as an Area of Critical Environmental Concern by the Bureau of Land Management.

The species and its habitat are threatened by recreational use in the areas where it occurs as well as the ongoing impacts of past water diversions, livestock grazing, and off-road-vehicle travel. Conservation measures implemented recently by the Bureau of Land Management in Nevada include the installation of fencing to exclude livestock, wild horses, burros, and other large mammals; the closure of access roads to spring, riparian, and wetland areas and the limiting of vehicles to designated routes; the establishment of a designated campground away from the habitats of sensitive species; the installation of educational signage; and, an increased staff presence, including law enforcement, a volunteer site steward during the 6-month period of peak visitor use, and noxious weed control. In California, public land management actions include not allowing livestock salting in the vicinity of springs, a proposed long-term monitoring plot, limitations on camping near springs, withdrawal from salable mineral leasing, recommendations to withdrawal the land from mineral entry, and noxious weed control treatments. These conservation measures have reduced the magnitude of threat to the species to moderate; all remaining threats are nonimminent and involve long-term changes to the habitat for the species resulting from past impacts. Until a monitoring program is in place that allows us to assess the long-term trend of the species, we have assigned an LPN of 11.

Pseudognaphalium (*Gnaphalium sandwicensium* var. *molokaiense* (Enaena)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Pseudognaphalium sandwicensium* var. *molokaiense* is a perennial herb found in strand vegetation in dry consolidated dunes on the islands of Molokai and Maui, Hawaii. This variety is known from 5 populations totaling approximately 200 to 20,000 individuals (depending upon rainfall) in the Moomomi area on the island of Molokai, and from 2 populations of a few individuals at Waiehu dunes and at Puu Kahulianapa on west Maui. *Pseudognaphalium sandwicensium* var. *molokaiense* is threatened by feral goats and axis deer that degrade and destroy habitat and possibly prey upon it, and by nonnative plants that compete for light and nutrients. Potential threats also include collection for lei-making, and off-road vehicles that directly damage plants and degrade habitat. Weed control protects one population on Molokai; however, no conservation efforts have been initiated to date for the other populations on Molokai or for the individuals on Maui. This species is represented in an ex situ collection. The ongoing threats from feral goats, axis deer, nonnative plants, collection, and off-road vehicles are of a high magnitude because no control measures have been undertaken for the Maui population or for the Molokai populations, and the threats result in direct mortality or significantly reduce reproductive capacity for the majority of the populations, leading to a relatively high likelihood of extinction. Therefore, we retained an LPN of 3 for this plant variety.

Psychotria hexandra ssp. *oahuensis* var. *oahuensis* (Kopiko)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Pteralyxia macrocarpa (Kaulu)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Ranunculus hawaiensis (Makou)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ranunculus hawaiensis* is an erect or ascending perennial herb found in mesic to wet forest dominated by *Metrosideros polymorpha* (ohia) and *Acacia koa* (koa) with scree substrate (loose stones or rocky debris on a slope) on the islands of Maui and Hawaii, Hawaii. This species is currently known from 20 individuals in 5 populations on

the island of Hawaii. One population on Maui (Kukui planeze) was not relocated on a survey conducted in 2006. In addition, one wild population at Waikamoi (also on Maui) has not been observed since 1995. *Ranunculus hawaiensis* is threatened by direct predation by slugs, feral pigs, goats, cattle, mouflon, and sheep; by pigs, goats, cattle, mouflon, and sheep that degrade and destroy habitat; and by nonnative plants that compete for light and nutrients. Three populations have been outplanted into protected exclosures; however, feral ungulates and nonnative plants are not controlled in the remaining, unfenced populations. In addition, the threat from introduced slugs is of a high magnitude because slugs occur throughout the limited range of this species and no effective measures have been undertaken to control them or prevent them from causing significant adverse impacts to this species. Overall, the threats from pigs, goats, cattle, mouflon, sheep, slugs, and nonnative plants are of a high magnitude, and ongoing (imminent) for *R. hawaiensis*. We retained an LPN of 2 for this species.

Ranunculus mauiensis (Makou)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ranunculus mauiensis* is an erect to weakly ascending perennial herb found in open sites in mesic to wet forest and along streams on the islands of Maui, Kauai, and Molokai, Hawaii. This species is currently known from 14 populations totaling 198 individuals. *Ranunculus mauiensis* is threatened by feral pigs, goats, mule deer, axis deer, and slugs that consume it; by habitat degradation and destruction by feral pigs, goats, and deer; and by nonnative plants that compete for light and nutrients. This species is represented in ex situ collections. Feral pigs have been fenced out of one Maui population of *R. mauiensis,* and nonnative plants have been reduced in the fenced area. One individual occurs in the Kamakou Preserve on Molokai, managed by The Nature Conservancy. However, ongoing conservation efforts benefit only two populations. The threats are of high magnitude and imminent because they are ongoing in the Kauai and the majority of the Maui populations. Therefore, we retained an LPN of 2 for this species.

Rorippa subumbellata (Tahoe yellow cress)—The following summary is based on information contained in our files and the petition we received on December 27, 2000. *Rorippa subumbellata* is a small perennial herb known only from the shores of Lake Tahoe in California and Nevada. Data collected over the last 25 years generally indicate that species occurrence fluctuates yearly as a function of both lake level and the amount of exposed habitat. Records kept since 1900 show a preponderance of years with high lake levels that would isolate and reduce *R. subumbellata* occurrences at higher beach elevations. From the standpoint of the species, less favorable peak years have occurred almost twice as often as more favorable low-level years. Annual surveys are conducted to determine population numbers, site occupancy, and general disturbance regime. During the 2003 and 2004 annual survey period, the lake level was approximately 6,224 feet (ft) (1,898 meters (m)); 2004 was the fourth consecutive year of low water. *Rorippa subumbellata* was present at 45 of the 72 sites surveyed (65 percent occupied), up from 15 sites (19 percent occupied) in 2000 when the lake level was high at 6,228 ft (1,898 m). Approximately 25,200 stems were counted or estimated in 2003, whereas during the 2000 annual survey, the estimated number of stems was 4,590. Lake levels began to rise again in 2005 and less habitat was available. Lake levels began to drop again in 2006 though 2008 leading to an increase in both occupied sites and estimated stem counts. During very low lake levels in 2009, an estimated 27,522 stems were observed at 47 sites, equal to the highest number of occupied sites previously recorded.

Many *Rorippa subumbellata* sites are intensively used for commercial and public purposes and are subject to various activities such as erosion control, marina developments, pier construction, and recreation. The U.S. Forest Service, California Tahoe Conservancy, and California Department of Parks and Recreation have management programs for *R. subumbellata* that include monitoring, fenced enclosures, and transplanting efforts when funds and staff are available. Public agencies (including the Service), private landowners, and environmental groups collaborated to develop a conservation strategy coupled with a Memorandum of Understanding-Conservation Agreement. The conservation strategy, completed in 2003, contains goals and objectives for recovery and survival, a research and monitoring agenda, and serves as the foundation for an adaptive management program. Because of the continued commitments to conservation demonstrated by regulatory and land management agencies participating in the conservation strategy, we have determined the threats to *R. subumbellata* from various land uses have been reduced to a moderate magnitude. In high-lake-level years such as 2005, however, recreational use is concentrated within *R. subumbellata* habitat, and we consider this threat in particular to be ongoing and imminent. Therefore, we are maintaining an LPN of 8 for this species.

Schiedea pubescens (Maolioli)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Schiedea pubescens* is a reclining or weakly climbing vine found in diverse mesic to wet forest on the islands of Maui, Molokai, and Hawaii, Hawaii. It is presumed extirpated from Lanai. Currently, this species is known from 8 populations totaling between 30 and 32 individuals on Maui, from 4 populations totaling between 21 and 22 individuals on Molokai, and from 1 population of 4 to 6 individuals on the island of Hawaii. *Schiedea pubescens* is threatened by feral pigs and goats that consume it and degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. Feral ungulates have been fenced out of the population of *S. pubescens* on the island of Hawaii. Feral goats have been fenced out of a few of the west Maui populations of *S. pubescens*. Nonnative plants have been reduced in the populations that are fenced on Maui. However, the threats are not controlled and are ongoing in the remaining unfenced populations on Maui and the four populations on Molokai. Fire is a potential threat to the Hawaii Island population. In light of the extremely low number of individuals of this species, the threats from goats and nonnative plants are of a high magnitude because they result in mortality and reduced reproductive capacity for the majority of the populations, leading to a relatively high likelihood of extinction. The threats are imminent because they are ongoing with respect to most of the populations. Therefore, we retained an LPN of 2 for this species.

Schiedea salicaria (no common name)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Sedum eastwoodiae (Red Mountain stonecrop)—The following summary is based on information contained in our files and information provided by the California Department of Fish and Game. The petition we received on May

11, 2004 provided no new information on the species. Red Mountain stonecrop is a perennial succulent which occupies relatively barren, rocky openings and cliffs in lower montane coniferous forests, between 1,900 and 4,000 feet elevation. Its distribution is limited to Red Mountain, Mendocino County, California, where it occupies in excess of 54 acres scattered over 4 square miles. Total population size has not been determined, but a preliminary estimate suggests the population may be in excess of 29,000 plants, occupying more than 27 discrete habitat polygons. Intensive monitoring suggests considerable annual variation in plant seedling success and inflorescence production.

The primary threat to the species is the potential for surface mining for chromium and nickel. The entire distribution Red Mountain stonecrop is either owned by mining interests, or is covered by mining claims, none of which are currently active. Surface mining would destroy habitat suitability for this species. The species is also believed threatened by tree and shrub encroachment into its habitat, in absence of fire. Some 25 percent of its known distribution occurred within the boundary of the Red Mountain Fire of June 2008. However, the extent and manner in which Red Mountain stonecrop and its habitat were affected by that fire is not yet known. The species distribution by ownership is described as follows: Federal (Bureau of Land Management), 95 percent; private, 5 percent. Given the magnitude (high) and immediacy (non-imminent) of the threat to the small, scattered populations, and its taxonomy (species), we assigned a listing priority number of 5 to this species.

Sicyos macrophyllus ('Anunu)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Sicyos macrophyllus* is a perennial vine found in wet *Metrosideros polymorpha* (ohia) forest and subalpine *Sophora chrysophylla-Myoporum sandwicense* (mamane-naio) forest. This species is known from 10 populations totaling between 24 and 26 individuals in the Kohala and Mauna Kea areas, and in Hawaii Volcanoes National Park (Puna area) on the island of Hawaii, Hawaii. It appears that a naturally occurring population at Kipuka Ki in Hawaii Volcanoes National Park is reproducing by seeds, but seeds have not been successfully germinated under nursery conditions.

This species is threatened by feral pigs, cattle, and mouflon sheep that degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. This species is represented in ex situ collections. Feral pigs have been fenced out of some of the areas where *S. macrophyllus* currently occurs, but the fences do not exclude sheep. Nonnative plants have been reduced in the populations that are fenced. However, the threats are not controlled and are ongoing in the remaining, unfenced populations, and are, therefore, imminent. Similarly the threat from mouflon sheep is ongoing and imminent in all populations, because the current fences do not exclude sheep. In addition, all of the threats are of a high magnitude because habitat degradation and competition from nonnative plants present a risk to the species, resulting in direct mortality or significantly reducing the reproductive capacity, leading to a relatively high likelihood of extinction. Therefore, we retained an LPN of 2 for this species.

Solanum nelsonii (popolo)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Solanum nelsonii* is a sprawling or trailing shrub found in coral rubble or sand in coastal sites. This species is known from populations on Molokai (approximately 300 plants), the island of Hawaii (5 plants), and the northwestern Hawaiian Islands (NWHI), Hawaii. The current populations in the NWHI are found on Midway (approximately 260 plants), Laysan (approximately 490 plants), Pearl and Hermes (unknown number of individuals), and Nihoa (8,000 to 15,000 adult plants). On Molokai, *S. nelsonii* is moderately threatened by ungulates that degrade and destroy habitat, and may eat *S. nelsonii.* On Molokai and the NWHI, this species is threatened by nonnative plants that outcompete and displace it. *Solanum nelsonii* is threatened by predation by a nonnative grasshopper in the NWHI. This species is represented in ex situ collections. Ungulate exclusion fences, routine fence monitoring and maintenance, and weed control protect the population of *S. nelsonii* on Molokai. Limited weed control is conducted in the NWHI. These threats are of moderate magnitude because of the relatively large number of plants, and the fact that this species is found on more than one island. The threats are imminent for the majority of the populations because they are ongoing and are not being controlled. We therefore retained an LPN of 8 for this species.

Sphaeralcea gierischii (Gierisch mallow)—The following information is based on information contained in our files, including site visits by species experts. There are nine known populations of this species on a combined total of approximately 59.5 ac (24.12 ha) in Arizona and Utah. Seven populations are found on approximately 55 ac (22.3 ha) managed by the Bureau of Land Management in Arizona. One population occurs on approximately 2 ac (0.81 ha) on land managed by the Arizona State Land Department. One population occurs on approximately 2.5 ac (1.01 ha) in Utah. The primary threat to the species in Arizona is ongoing gypsum mining and associated activities. The primary threat to the species in Utah is potential impacts from off-road vehicle use. The threats are high in magnitude, since survival of the species is threatened throughout its entire range in Arizona by gypsum mining, with the two largest populations in active mining operations. Loss of those two populations would significantly reduce the total number of individuals throughout the range, threatening the long-term viability of this species. The threats are imminent, since they are ongoing in Arizona. Therefore, we assigned an LPN of 2 to this species.

Stenogyne cranwelliae (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Stenogyne cranwelliae* is a creeping vine found in wet forest dominated by *Metrosideros polymorpha* (ohia) on the island of Hawaii, Hawaii. *Stenogyne cranwelliae* is known from 10 populations totaling fewer than 110 individuals. This species is threatened by feral pigs that degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. In addition, *S. cranwelliae* is potentially threatened by feral pigs and rats that may directly prey upon it, and by randomly occurring natural events such as hurricanes and landslides. This species is represented in an ex situ collection. All of the threats are ongoing rangewide, and no efforts for control or eradication are being undertaken for feral pigs, nonnative plants, or rats. These threats significantly affect the entire species particularly in light of its small population size. We retained an LPN of 2 because these imminent threats are of a high magnitude.

Symphyotrichum georgianum (Georgia aster)—The following summary is based on information contained in our files. No new information was provided in the petition we received on

May 11, 2004. Georgia aster is a relict species of post oak savanna/prairie communities that existed in the southeast prior to widespread fire suppression and extirpation of large native grazing animals. Georgia aster currently occurs in the States of Alabama, Georgia, North Carolina and South Carolina. The species is presumed extant in 8 counties in Alabama, 22 counties in Georgia, 9 counties in North Carolina, and 15 counties in South Carolina. The species appears to have been eliminated from Florida.

Most remaining populations survive adjacent to roads, utility rights-of-way and other openings where current land management mimics natural disturbance regimes. Most populations are small (10–100 stems), and since the species' main mode of reproduction is vegetative, each isolated population may represent only a few genotypes. Many populations are currently threatened by one or more of the following factors: Woody succession due to fire suppression, development, highway expansion or improvement, and herbicide application. However, the species is still relatively widely distributed, and recent information indicates the species is more abundant than when we initially identified it as a candidate for listing. Taking into account its distribution and abundance, the magnitude of threats is moderate. Thus we assigned an LPN of 8 for this species.

Zanthoxylum oahuense (Ae)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Ferns and Allies

Christella boydiae (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is a small- to medium-sized fern found in mesic to wet forest along stream banks on the islands of Oahu and Maui, Hawaii. Historically, this species was also found on the island of Hawaii, but it has been extirpated there. Currently, this species is known from 7 populations totaling approximately 300 individuals. This species is threatened by feral pigs that degrade and destroy habitat and may eat this plant, and by nonnative plants that compete for light and nutrients. Feral pigs have been fenced out of the largest population on Maui, and nonnative plants have been reduced in the fenced area. No conservation efforts are under way to alleviate threats to the other two populations on Maui, or for the two populations on Oahu. This species is represented in an ex situ collection. The magnitude of the threats acting upon the currently extant populations is moderate because the largest population is protected from pigs, and nonnative plants have been reduced in this area. The threats are ongoing and therefore imminent. Therefore, we retained an LPN of 8 for this species.

Doryopteris takeuchii (no common name)—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 proposed listing rule that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Huperzia stemmermanniae (Waewaeiole)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This species is an epiphytic pendant clubmoss found in mesic-to-wet *Metrosideros polymorpha-Acacia koa* (ohia-koa) forests on the islands of Maui and Hawaii, Hawaii. Only 3 populations are known, on Maui and Hawaii, totaling approximately 30 individuals. The Maui population has not been relocated since 1995. *Huperzia stemmermanniae* is threatened by feral pigs, goats, cattle, and axis deer that degrade and destroy habitat, and by nonnative plants that compete for light, space, and nutrients. *Huperzia stemmermanniae* is also threatened by randomly occurring natural events due to its small population size. One individual at Waikamoi Preserve may benefit from fencing for axis deer and pigs. This species is represented in ex situ collections. The threats from pigs, goats, cattle, axis deer, and nonnative plants are of a high magnitude because they are sufficiently severe to adversely affect the species throughout its limited range, resulting in direct mortality or significantly reducing reproductive capacity, leading to a relatively high likelihood of extinction. The threats are imminent because they are ongoing. Therefore, we retained an LPN of 2 for this species.

Microlepia strigosa var. *mauiensis* (Palapalai)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Microlepia strigosa* var. *mauiensis* is a terrestrial fern found in mesic-to-wet forests. It is currently found in Hawaii on the islands of Maui, Oahu, and Hawaii, from at least 9 populations totaling at least 50 individuals. There is a possibility that the range of this plant variety could be larger and include the other main Hawaiian Islands. *Microlepia strigosa* var. *mauiensis* is threatened by feral pigs that degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. Pigs have been fenced out of some areas on east and west Maui, and on Hawaii, where *M. strigosa* var. *mauiensis* currently occurs, and nonnative plants have been reduced in the fenced areas. However, the threats are not controlled and are ongoing in the remaining unfenced populations on Maui, Oahu, and Hawaii. Therefore, the threats from feral pigs and nonnative plants are imminent. The threats are of a high magnitude because they are sufficiently severe to adversely affect the species throughout its range, resulting in direct mortality or significantly reducing reproductive capacity, leading to a relatively high likelihood of extinction. We therefore retained an LPN of 3 for *M. strigosa* var. *mauiensis.*

Petitions To Reclassify Species Already Listed or Add to the Listed Range

We previously made warranted-but-precluded findings on seven petitions seeking to reclassify threatened species to endangered status, and one petition seeking to add New Mexico to the listed range of the Canada lynx. The taxa involved in the reclassification petitions are three populations of the grizzly bear (*Ursus arctos horribilis*), delta smelt (*Hypomesus transpacificus*), the spikedace (*Meda fulgida*), the loach minnow (*Tiaroga cobitis*), and *Sclerocactus brevispinus* (Pariette cactus). Because these species are already listed under the Act, they are not candidates for listing and are not included in Table 1. However, this notice and associated species assessment forms also constitute the resubmitted petition findings for these species. For the three grizzly bear populations, we have not updated the information in our assessments through this notice as explained below. Although we are completing an ongoing review of the status of the grizzly bear in the lower 48 States outside of the Greater Yellowstone Areas (see below), we continue to find that reclassification to endangered for each of the three populations (described below) is warranted but precluded by work identified above (*see* "*Petition Findings for Candidate Species*"). We also have not updated the information in our assessments for the spikedace and loach minnow through this notice as explained below. For delta smelt, we

have not updated the information included in the 12-month finding (published April 7, 2010), which serves as our assessment; we are currently conducting a 5-year review, which will provide updated information when we complete it later this year. For *Sclerocactus brevispinus* and Canada lynx in New Mexico, our updated assessments are provided below. We find that reclassification to endangered status for the delta smelt, spikedace, loach minnow, and *Sclerocactus brevispinus* and adding New Mexico to the listed range of the Canada lynx are all currently warranted but precluded by work identified above (*see* "*Petition Findings for Candidate Species*"). One of the primary reasons that the work identified above is considered higher priority is that the grizzly bear populations, delta smelt, spikedace, loach minnow, and *Sclerocactus brevispinus* are currently listed as threatened, and therefore already receive certain protections under the Act. We promulgated regulations extending take prohibitions for endangered species under section 9 to threatened species (50 CFR 17.31). Prohibited actions under section 9 include, but are not limited to, take (*i.e.,* to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such activity). For plants, prohibited actions under section 9 include removing or reducing to possession any listed plant from an area under Federal jurisdiction (50 CFR 17.61). Other protections include those under section 7(a)(2) of the Act 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, Cabinet-Yaak, and Selkirk populations (Region 6)—We have not updated the information in our uplisting findings with regard to the grizzly bear (*Ursus arctos horribilis*) populations in the North Cascade, the Cabinet-Yaak, or the Selkirk Ecosystems in this notice. Between 1991 and 1999, we issued warranted-but-precluded findings to reclassify grizzly bears as endangered in the North Cascades (56 FR 33892, July 24, 1991; 63 FR 30453, June 4, 1998), the Cabinet-Yaak (58 FR 8250, February 12, 1993; 64 FR 26725, May 17, 1999), and the Selkirk Ecosystems (64 FR 26725, May 17, 1999).

On April 18, 2007, We initiated a 5-year review to evaluate the current status of grizzly bears in the lower 48 States (72 FR 19549–19551). This status review will fully evaluate the biological conservation status of each population according to the 5 factors in Section 4 of the Act. Although there is sufficient evidence to support multiple DPSs within the lower 48 State listing, we do not intend to complete a DPS analysis of each of these populations individually within the 5-year review. Instead, any DPS analyses would be completed prior to or concurrent with any rulemakings. We expect this 5-year review to be completed in late 2010.

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)—In March 2004, we completed a 5-year review for delta smelt in which we determined a change in status from threatened to endangered was not recommended. While none of the threats, other than apparent abundance, show significant differences from 2004, we now have strong evidence, not available at the time of our 5-year review, that at least some of those factors are endangering the species. The primary evidence is the continuing downward trend in delta smelt abundance indices since a significant decline that occurred in 2002. The most recent fall midwater trawl abundance index is the lowest ever recorded—less than one-tenth the level it was in 2003. In addition, a 2005 population viability analysis calculated a 50-percent likelihood that the species could reach effective extinction (8,000 individuals) within 20 years.

There are many primary threats to the species including: Direct entrainments by State and Federal water export facilities; summer and fall increases in salinity and water clarity, and effects from introduced species. Additional threats are predation by striped and largemouth bass and inland silversides, entrainment into power plants, 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.

As a result of our analysis of the best available scientific and commercial information, we have assigned uplisting the delta smelt an LPN of 2, based on high magnitude and immediacy of threats. The magnitude of the threats is high, because they occur rangewide and result in mortality or significantly reduce the reproductive capacity of the species, leading to a relatively high likelihood of extinction. They are imminent because these threats are ongoing and, in some cases (*e.g.,* nonnative species), considered irreversible.

Spikedace (*Meda fulgida*) (Region 2)—We continue to find that uplisting this species to endangered is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed uplisting rule, in combination with a proposed designation of critical habitat, that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

Loach minnow (*Tiaroga cobitis*) (Region 2)—We continue to find that uplisting this species to endangered is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed uplisting rule, in combination with a proposed designation of critical habitat, that we expect to publish prior to making the next annual resubmitted 12-month petition finding.

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)—The Pariette cactus is restricted to clay badlands of the Wagon Hound member of the Uinta Formation in the Uinta Basin of northeastern Utah. The species is restricted to one population with an overall range of approximately 10 miles by 5 miles 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 by its previous inclusion within the species *Sclerocactus glaucus.* Based on current information, we are assigning the Pariette cactus the LPN of 6 for uplisting to endangered. The threats are of a high magnitude since any one of the threats has the potential to severely affect this species because it is a narrow endemic species with a highly limited range and distribution, but the threats are not currently ongoing.

Canada lynx (*Lynx canadensis*) within the State of New Mexico—In our finding of December 17, 2009 (74 FR 66937), we determined that lynx in New Mexico were warranted for listing due to their presence in the state as a result of the Colorado reintroduction effort and we assigned an LPN of 12 to amending the listing of lynx to include New Mexico in the listing. We reconfirm that

assigning an LPN of 12 is appropriate based on nonimminent threats of a low magnitude to the lynx DPS. Human-caused mortality does not occur at a level such that it creates a significant threat to lynx in the contiguous United States. The magnitude of threats to the lynx DPS, inclusive of those lynx in New Mexico, is low. The threats occur infrequently and are nonimminent. We do not consider lynx in New Mexico to be essential to the survival or recovery of the DPS. Furthermore, the amount of suitable habitat for lynx in New Mexico is considered negligible relative to the amount of habitat within the listed range. Potential impacts to the habitat have not been documented to threaten lynx, either in New Mexico or outside of it. The areas outside the currently listed area are not essential to the conservation of the species. The majority of lynx habitats within the contiguous United States are already protected by the Act. Because lynx in the lower 48 are listed as a DPS, the appropriate LPN for this level of magnitude and immediacy of threats is 12.

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. 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 Act. 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 "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 November 9, 2009) that are no longer proposed species or candidates for listing. Since November 9, 2009, we listed 54 species and removed 1 species from candidate status for the reason indicated by the code. 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 we no longer regard the species as 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 to warrant continuing candidate status, or issuing a proposed or final listing.

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

I—Species for which we have insufficient information on biological vulnerability and threats to support issuance of a proposed rule to list.

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 Act'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 or continuance of candidate status 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 NE. 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, Bishop Henry Whipple Federal Building, One Federal Drive, Fort Snelling, MN 55111–4056 (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 in response to the previous CNOR 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 pursuant to section 4(b)(7) of the Act 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.

Before including your address, phone number, e-mail 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 indentifying 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 (16 U.S.C. 1531 *et seq.*).

Dated: October 22, 2010.

Rowan W. Gould,

Acting Director, Fish and Wildlife Service.

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:						
C*	2	R4	*Eumops floridanus*	Molossidae	Bat, Florida bonneted	U.S.A. (FL).
C*	3	R1	*Emballonura semicaudata rotensis.*	Emballonuridae	Bat, Pacific sheath-tailed (Mariana Islands subspecies).	U.S.A. (GU, CNMI).
C*	3	R1	*Emballonura semicaudata semicaudata.*	Emballonuridae	Bat, Pacific sheath-tailed (American Samoa DPS).	U.S.A. (AS), Fiji, Independent Samoa, Tonga, Vanuatu.
C*	2	R5	*Sylvilagus transitionalis.*	Leporidae	Cottontail, New England.	U.S.A. (CT, MA, ME, NH, NY, RI, VT).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	6	R8	*Martes pennanti*	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	R2	*Zapus hudsonius luteus.*	Zapodidae	Mouse, New Mexico meadow jumping.	U.S.A. (AZ, CO, NM).
C*	3	R1	*Thomomys mazama couchi.*	Geomyidae	Pocket gopher, Shelton.	U.S.A. (WA).
C	3	R1	*Thomomys mazama douglasii.*	Geomyidae	Pocket gopher, Brush Prairie.	U.S.A. (WA).
C*	3	R1	*Thomomys mazama glacialis.*	Geomyidae	Pocket gopher, Roy Prairie.	U.S.A. (WA).
C*	3	R1	*Thomomys mazama louiei.*	Geomyidae	Pocket gopher, Cathlamet.	U.S.A. (WA).
C*	3	R1	*Thomomys mazama melanops.*	Geomyidae	Pocket gopher, Olympic.	U.S.A. (WA).
C*	3	R1	*Thomomys mazama pugetensis.*	Geomyidae	Pocket gopher, Olympia.	U.S.A. (WA).
C*	3	R1	*Thomomys mazama tacomensis.*	Geomyidae	Pocket gopher, Tacoma.	U.S.A. (WA).
C*	3	R1	*Thomomys mazama tumuli.*	Geomyidae	Pocket gopher, Tenino	U.S.A. (WA).
C*	3	R1	*Thomomys mazama yelmensis.*	Geomyidae	Pocket gopher, Yelm	U.S.A. (WA).
C*	3	R6	*Cynomys gunnisoni*	Sciuridae	Prairie dog, Gunnison's (central and south-central Colorado, north-central New Mexico SPR).	U.S.A. (CO, NM).
C*	9	R1	*Spermophilus brunneus endemicus.*	Sciuridae	Squirrel, Southern Idaho ground.	U.S.A. (ID).
C*	5	R1	*Spermophilus washingtoni.*	Sciuridae	Squirrel, Washington ground.	U.S.A. (WA, OR).
BIRDS:						
C*	3	R1	*Porzana tabuensis*	Rallidae	Crake, spotless (American Samoa DPS).	U.S.A. (AS), Australia, Fiji, Independent Samoa, Marquesas, Philippines, Society Islands, Tonga.
C*	3	R8	*Coccyzus americanus*	Cuculidae	Cuckoo, yellow-billed (Western U.S. DPS).	U.S.A. (Lower 48 States), Canada, Mexico, Central and South America.
C*	9	R1	*Gallicolumba stairi*	Columbidae	Ground-dove, friendly (American Samoa DPS).	U.S.A. (AS), Independent Samoa.
C*	3	R1	*Eremophila alpestris strigata.*	Alaudidae	Horned lark, streaked	U.S.A. (OR, WA), Canada (BC).
C*	3	R5	*Calidris canutus rufa*	Scolopacidae	Knot, red	U.S.A. (Atlantic coast), Canada, South America.
C*	8	R7	*Gavia adamsii*	Gaviidae	Loon, yellow-billed	U.S.A. (AK), Canada, Norway, Russia, coastal waters of southern Pacific and North Sea.
C*	2	R7	*Brachyramphus brevirostris.*	Alcidae	Murrelet, Kittlitz's	U.S.A. (AK), Russia.
C*	5	R8	*Synthliboramphus hypoleucus.*	Alcidae	Murrelet, Xantus's	U.S.A. (CA), Mexico.

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	2	R6	*Anthus spragueii*	Motacillidae	Pipit, Sprauge's	U.S.A. (AL, AR, AZ, CA, GA, LA, MA, MI, MN, MS, MT, ND, OH, OK, SC, SD, TX), Canada, Mexico.
PT	—	R6	*Charadrius montanus*	Charadriidae	Plover, mountain	U.S.A. (AZ, CA, CO, KS, MT, ND, NE, NM, NN, OK, SD, TX, UT, WY), Canada (AB, SK), Mexico.
C*	2	R2	*Tympanuchus pallidicinctus*.	Phasianidae	Prairie-chicken, lesser	U.S.A. (CO, KA, NM, OK, TX).
C*	8	R6	*Centrocercus urophasianus*.	Phasianidae	Sage-grouse, greater	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK).
C*	3	R8	*Centrocercus urophasianus*.	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).
C*	6	R1	*Centrocercus urophasianus*.	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).
C*	2	R6	*Centrocercus minimus*	Phasianidae	Sage-grouse, Gunnison.	U.S.A. (AZ, CO, NM, UT).
C*	3	R1	*Oceanodroma castro*	Hydrobatidae	Storm-petrel, band-rumped (Hawaii DPS).	U.S.A. (HI), Atlantic Ocean, Ecuador (Galapagos Islands), Japan.
C*	11	R4	*Dendroica angelae*	Emberizidae	Warbler, elfin-woods	U.S.A. (PR).
REPTILES:						
C*	3	R2	*Thamnophis eques megalops*.	Colubridae	Gartersnake, northern Mexican.	U.S.A. (AZ, NM, NV), Mexico.
C*	2	R2	*Sceloporus arenicolus*	Iguanidae	Lizard, sand dune	U.S.A. (TX, NM).
C*	9	R3	*Sistrurus catenatus catenatus*.	Viperidae	Massasauga (=rattlesnake), eastern.	U.S.A. (IA, IL, IN, MI, MO, MN, NY, OH, PA, WI), Canada.
C*	3	R4	*Pituophis melanoleucus lodingi*.	Colubridae	Snake, black pine	U.S.A. (AL, LA, MS).
C*	5	R4	*Pituophis ruthveni*	Colubridae	Snake, Louisiana pine	U.S.A. (LA, TX).
C*	3	R2	*Chionactis occipitalis klauberi*.	Colubridae	Snake, Tucson shovel-nosed.	U.S.A. (AZ).
C*	3	R2	*Kinosternon sonoriense longifemorale*.	Kinosternidae	Turtle, Sonoyta mud	U.S.A. (AZ), Mexico.
AMPHIBIANS:						
C*	9	R8	*Rana luteiventris*	Ranidae	Frog, Columbia spotted (Great Basin DPS).	U.S.A. (AK, ID, MT, NV, OR, UT, WA, WY), Canada (BC).
C*	3	R8	*Rana muscosa*	Ranidae	Frog, mountain yellow-legged (Sierra Nevada DPS).	U.S.A. (CA, NV).
C*	2	R1	*Rana pretiosa*	Ranidae	Frog, Oregon spotted	U.S.A. (CA, OR, WA), Canada (BC).
C*	11	R8	*Lithobates onca*	Ranidae	Frog, relict leopard	U.S.A. (AZ, NV, UT).
PE	3	R3	*Cryptobranchus alleganiensis bishopi*.	Crytobranchidae	Hellbender, Ozark	U.S.A. (AR, MO).
C*	2	R2	*Eurycea waterlooensis*	Plethodontidae	Salamander, Austin blind.	U.S.A. (TX).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	8	R2	*Eurycea naufragia*	Plethodontidae	Salamander, Georgetown.	U.S.A. (TX).
C*	2	R2	*Plethodon neomexicanus*.	Plethodontidae	Salamander, Jemez Mountains.	U.S.A. (NM).
C*	8	R2	*Eurycea tonkawae*	Plethodontidae	Salamander, Jollyville Plateau.	U.S.A. (TX).
C*	2	R2	*Eurycea chisholmensis*.	Plethodontidae	Salamander, Salado	U.S.A. (TX).
C*	11	R8	*Bufo canorus*	Bufonidae	Toad, Yosemite	U.S.A. (CA).
C	3	R2	*Hyla wrightorum*	Hylidae	Treefrog, Arizona (Huachuca/Canelo DPS).	U.S.A. (AZ), Mexico (Sonora).
C*	8	R4	*Necturus alabamensis*	Proteidae	Waterdog, black warrior (=Sipsey Fork).	U.S.A. (AL).
FISHES:						
C*	8	R2	*Gila nigra*	Cyprinidae	Chub, headwater	U.S.A. (AZ, NM).
C*	7	R6	*Iotichthys phlegethontis*.	Cyprinidae	Chub, least	U.S.A. (UT).
C*	9	R2	*Gila robusta*	Cyprinidae	Chub, roundtail (Lower Colorado River Basin DPS).	U.S.A. (AZ, CO, NM, UT, WY).
PE	5	R4	*Phoxinus saylori*	Cyprinidae	Dace, laurel	U.S.A. (TN).
C*	11	R6	*Etheostoma cragini*	Percidae	Darter, Arkansas	U.S.A. (AR, CO, KS, MO, OK).
PE	5	R4	*Etheostoma susanae*	Percidae	Darter, Cumberland	U.S.A. (KY, TN).
C	2	R5	*Crystallaria cincotta*	Percidae	Darter, diamond	U.S.A. (KY, OH, TN, WV).
C	3	R4	*Etheostoma sagitta spilotum*.	Percidae	Darter, Kentucky arrow.	U.S.A. (KY).
C*	8	R4	*Percina aurora*	Percidae	Darter, Pearl	U.S.A. (LA, MS).
PE	2	R4	*Etheostoma phytophilum*.	Percidae	Darter, rush	U.S.A. (AL).
PE	2	R4	*Etheostoma moorei*	Percidae	Darter, yellowcheek	U.S.A. (AR).
C*	3	R6	*Thymallus arcticus*	Salmonidae	Grayling, Arctic (upper Missouri River DPS).	U.S.A. (AK, MI, MT, WY), Canada, northern Asia, northern Europe.
PE	2	R4	*Noturus crypticus*	Ictaluridae	Madtom, chucky	U.S.A. (TN).
C	5	R4	*Moxostoma* sp	Catostomidae	Redhorse, sicklefin	U.S.A. (GA, NC, TN).
C*	2	R3	*Cottus* sp	Cottidae	Sculpin, grotto	U.S.A. (MO).
C*	5	R2	*Notropis oxyrhynchus*	Cyprinidae	Shiner, sharpnose	U.S.A. (TX).
C*	5	R2	*Notropis buccula*	Cyprinidae	Shiner, smalleye	U.S.A. (TX).
C*	3	R2	*Catostomus discobolus yarrowi*.	Catostomidae	Sucker, Zuni bluehead	U.S.A. (AZ, NM).
PSAT	N/A	R1	*Salvelinus malma*	Salmonidae	Trout, Dolly Varden	U.S.A. (AK, WA), Canada, East Asia.
C*	9	R2	*Oncorhynchus clarki virginalis*.	Salmonidae	Trout, Rio Grande cutthroat.	U.S.A. (CO, NM).
CLAMS:						
C	5	R4	*Villosa choctawensis*	Unionidae	Bean, Choctaw	U.S.A. (AL, FL).
PE	2	R3	*Villosa fabalis*	Unionidae	Bean, rayed	U.S.A. (IL, IN, KY, MI, NY, OH, TN, PA, VA, WV), Canada (ON).
C	2	R4	*Fusconaia rotulata*	Unionidae	Ebonyshell, round	U.S.A. (AL, FL).
C*	8	R2	*Popenaias popei*	Unionidae	Hornshell, Texas	U.S.A. (NM, TX), Mexico.
C*	2	R4	*Ptychobranchus subtentum*.	Unionidae	Kidneyshell, fluted	U.S.A. (AL, KY, TN, VA).
C	2	R4	*Ptychobranchus jonesi*	Unionidae	Kidneyshell, southern	U.S.A. (AL, FL).
C*	2	R4	*Lampsilis rafinesqueana*.	Unionidae	Mucket, Neosho	U.S.A. (AR, KS, MO, OK).
C	2	R3	*Plethobasus cyphyus*	Unionidae	Mussel, sheepnose	U.S.A. (AL, IA, IL, IN, KY, MN, MO, MS, OH, PA, TN, VA, WI, WV).
C*	2	R4	*Margaritifera marrianae*.	Margaritiferidae	Pearlshell, Alabama	U.S.A. (AL).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	2	R4	*Lexingtonia dolabelloides*.	Unionidae	Pearlymussel, slabside.	U.S.A. (AL, KY, TN, VA).
C	5	R4	*Pleurobema strodeanum*.	Unionidae	Pigtoe, fuzzy	U.S.A. (AL, FL).
C	5	R4	*Fusconaia escambia* ..	Unionidae	Pigtoe, narrow	U.S.A. (AL, FL).
C	11	R4	*Fusconaia (=Quincuncina) burkei*.	Unionidae	Pigtoe, tapered	U.S.A. (AL, FL).
C	9	R4	*Quadrula cylindrica cylindrica*.	Unionidae	Rabbitsfoot	U.S.A. (AL, AR, GA, IN, IL, KS, KY, LA, MS, MO, OK, OH, PA, TN, WV).
C	5	R4	*Hamiota (=Lampsilis) australis*.	Unionidae	Sandshell, southern	U.S.A. (AL, FL).
PE	–	R3	*Epioblasma triquetra* ..	Unionidae	Snuffbox	U.S.A. (IN, MI, NY, OH, PA, WV), Canada (ON).
C	4	R3	*Cumberlandia monodonta*.	Margaritiferidae	Spectaclecase	U.S.A. (AL, AR, IA, IN, IL, KS, KY, MO, MN, NE, OH, TN, VA, WI, WV).
PE	2	R4	*Elliptio spinosa*	Unionidae	Spinymussel, Altamaha.	U.S.A. (GA).
SNAILS:						
C	8	R4	*Elimia melanoides*	Pleuroceridae	Mudalia, black	U.S.A. (AL).
C*	2	R1	*Ostodes strigatus*	Potaridae	Sisi snail	U.S.A. (AS).
C*	2	R2	*Pseudotryonia adamantina*.	Hydrobiidae	Snail, Diamond Y Spring.	U.S.A. (TX).
C*	2	R1	*Samoana fragilis*	Partulidae	Snail, fragile tree	U.S.A. (GU, MP).
C*	2	R1	*Partula radiolata*	Partulidae	Snail, Guam tree	U.S.A. (GU).
C*	2	R1	*Partula gibba*	Partulidae	Snail, Humped tree	U.S.A. (GU, MP).
C*	2	R1	*Partulina semicarinata*	Achatinellidae	Snail, Lanai tree	U.S.A. (HI).
C*	2	R1	*Partulina variabilis*	Achatinellidae	Snail, Lanai tree	U.S.A. (HI).
C*	2	R1	*Partula langfordi*	Partulidae	Snail, Langford's tree	U.S.A. (MP).
C*	2	R2	*Cochliopa texana*	Hydrobiidae	Snail, Phantom cave ..	U.S.A. (TX).
C*	2	R1	*Newcombia cumingi*	Achatinellidae	Snail, Newcomb's tree	U.S.A. (HI).
C*	2	R1	*Eua zebrina*	Partulidae	Snail, Tutuila tree	U.S.A. (AS).
C*	2	R2	*Pyrgulopsis chupaderae*.	Hydrobiidae	Springsnail, Chupadera.	U.S.A. (NM).
C*	11	R8	*Pyrgulopsis notidicola*	Hydrobiidae	Springsnail, elongate mud meadows.	U.S.A. (NV).
C*	11	R2	*Pyrgulopsis gilae*	Hydrobiidae	Springsnail, Gila	U.S.A. (NM).
C*	2	R2	*Tryonia circumstriata (=stocktonensis)*.	Hydrobiidae	Springsnail, Gonzales	U.S.A. (TX).
C*	8	R2	*Pyrgulopsis thompsoni*	Hydrobiidae	Springsnail, Huachuca	U.S.A. (AZ), Mexico.
C*	11	R2	*Pyrgulopsis thermalis*	Hydrobiidae	Springsnail, New Mexico.	U.S.A. (NM).
C*	8	R2	*Pyrgulopsis morrisoni*	Hydrobiidae	Springsnail, Page	U.S.A. (AZ).
C*	2	R2	*Tryonia cheatumi*	Hydrobiidae	Springsnail (=Tryonia), Phantom.	U.S.A. (TX).
C	2	R2	*Pyrgulopsis bernardina*.	Hydrobiidae	Springsnail, San Bernardino.	U.S.A. (AZ), Mexico (Sonora).
C*	2	R2	*Pyrgulopsis trivialis*	Hydrobiidae	Springsnail, Three Forks.	U.S.A. (AZ).
C*	5	R2	*Sonorella rosemontensis*.	Helminthoglyptidae	Talussnail, Rosemont	U.S.A. (AZ).
INSECTS:						
C*	8	R1	*Nysius wekiuicola*	Lygaeidae	Bug, Wekiu	U.S.A. (HI).
C	3	R4	*Strymon acis bartrami*	Lycaenidae	Butterfly, Bartram's hairstreak.	U.S.A. (FL).
C	3	R4	*Anaea troglodyta floridalis*.	Nymphalidae	Butterfly, Florida leafwing.	U.S.A. (FL).
C*	3	R1	*Hypolimnas octucula mariannensis*.	Nymphalidae	Butterfly, Mariana eight-spot.	U.S.A. (GU, MP).
C*	2	R1	*Vagrans egistina*	Nymphalidae	Butterfly, Mariana wandering.	U.S.A. (GU, MP).
C*	3	R4	*Cyclargus thomasi bethunebakeri*.	Lycaenidae	Butterfly, Miami blue ..	U.S.A. (FL), Bahamas.

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	5	R4	*Glyphopsyche sequatchie*.	Limnephilidae	Caddisfly, Sequatchie	U.S.A. (TN).
C	5	R4	*Pseudanophthalmus insularis*.	Carabidae	Cave beetle, Baker Station (= insular).	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus caecus*.	Carabidae	Cave beetle, Clifton	U.S.A. (KY).
C	11	R4	*Pseudanophthalmus colemanensis*.	Carabidae	Cave beetle, Coleman	U.S.A. (TN).
C	5	R4	*Pseudanophthalmus fowlerae*.	Carabidae	Cave beetle, Fowler's	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus frigidus*.	Carabidae	Cave beetle, icebox	U.S.A. (KY).
C	5	R4	*Pseudanophthalmus tiresias*.	Carabidae	Cave beetle, Indian Grave Point (= Soothsayer).	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus inquisitor*.	Carabidae	Cave beetle, inquirer	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus troglodytes*.	Carabidae	Cave beetle, Louisville	U.S.A. (KY).
C	5	R4	*Pseudanophthalmus paulus*.	Carabidae	Cave beetle, Noblett's	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus parvus*.	Carabidae	Cave beetle, Tatum	U.S.A. (KY).
C*	3	R1	*Euphydryas editha taylori*.	Nymphalidae	Checkerspot butterfly, Taylor's (= Whulge).	U.S.A. (OR, WA), Canada (BC).
C*	9	R1	*Megalagrion nigrohamatum nigrolineatum*.	Coenagrionidae	Damselfly, blackline Hawaiian.	U.S.A. (HI).
C*	2	R1	*Megalagrion leptodemas*.	Coenagrionidae	Damselfly, crimson Hawaiian.	U.S.A. (HI).
C*	2	R1	*Megalagrion oceanicum*.	Coenagrionidae	Damselfly, oceanic Hawaiian.	U.S.A. (HI).
C*	8	R1	*Megalagrion xanthomelas*.	Coenagrionidae	Damselfly, orangeblack Hawaiian.	U.S.A. (HI).
PE	2	R8	*Dinacoma caseyi*	Scarabidae	June beetle, Casey's	U.S.A. (CA).
C	5	R8	*Ambrysus funebris*	Naucoridae	Naucorid bug (=Furnace Creek), Nevares Spring.	U.S.A. (CA).
C*	2	R1	*Drosophila digressa*	Drosophilidae	fly, Hawaiian Picture-wing.	U.S.A. (HI).
C*	8	R2	*Heterelmis stephani*	Elmidae	Riffle beetle, Stephan's.	U.S.A. (AZ).
C*	8	R3	*Hesperia dacotae*	Hesperiidae	Skipper, Dakota	U.S.A. (MN, IA, SD, ND, IL), Canada.
C*	8	R1	*Polites mardon*	Hesperiidae	Skipper, Mardon	U.S.A. (CA, OR, WA).
C*	2	R6	*Cicindela albissima*	Cicindelidae	Tiger beetle, Coral Pink Sand Dunes.	U.S.A. (UT).
C*	5	R4	*Cicindela highlandensis*.	Cicindelidae	Tiger beetle, highlands.	U.S.A. (FL).
ARACHNIDS:						
C*	2	R2	*Cicurina wartoni*	Dictynidae	Meshweaver, Warton's cave.	U.S.A. (TX).
CRUSTACEANS:						
C	2	R2	*Gammarus hyalleloides*.	Gammaridae	Amphipod, diminutive	U.S.A. (TX).
C	8	R5	*Stygobromus kenki*	Crangonyctidae	Amphipod, Kenk's	U.S.A. (DC, MD).
C*	5	R1	*Metabetaeus lohena*	Alpheidae	Shrimp, anchialine pool.	U.S.A. (HI).
C*	5	R1	*Palaemonella burnsi*	Palaemonidae	Shrimp, anchialine pool.	U.S.A. (HI).
C*	5	R1	*Procaris hawaiana*	Procarididae	Shrimp, anchialine pool.	U.S.A. (HI).
C*	4	R1	*Vetericaris chaceorum*	Procaridae	Shrimp, anchialine pool.	U.S.A. (HI).
FLOWERING PLANTS:						
C*	11	R8	*Abronia alpina*	Nyctaginaceae	Sand-verbena, Ramshaw Meadows.	U.S.A. (CA).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	8	R4	*Agave eggersiana*	Agavaceae	No common name	U.S.A. (VI).
C*	8	R4	*Arabis georgiana*	Brassicaceae	Rockcress, Georgia	U.S.A. (AL, GA).
C*	11	R4	*Argythamnia blodgettii*	Euphorbiaceae	Silverbush, Blodgett's	U.S.A. (FL).
C*	3	R1	*Artemisia campestris* var. *wormskioldii*.	Asteraceae	Wormwood, northern	U.S.A. (OR, WA).
C*	5	R1	*Astragalus anserinus*	Fabaceae	Milkvetch, Goose Creek.	U.S.A. (ID, NV, UT).
C	3	R1	*Astragalus cusickii* var. *packardiae*.	Fabaceae	Milkvetch, Packard's	U.S.A. (ID).
C*	11	R6	*Astragalus tortipes*	Fabaceae	Milkvetch, Sleeping Ute.	U.S.A. (CO).
C*	2	R1	*Bidens amplectens*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	3	R1	*Bidens campylotheca pentamera*.	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	3	R1	*Bidens campylotheca waihoiensis*.	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	8	R1	*Bidens conjuncta*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	3	R1	*Bidens micrantha ctenophylla*.	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	8	R4	*Brickellia mosieri*	Asteraceae	Brickell-bush, Florida	U.S.A. (FL).
C*	2	R1	*Calamagrostis expansa*.	Poaceae	Reedgrass, Maui	U.S.A. (HI).
C*	2	R1	*Calamagrostis hillebrandii*.	Poaceae	Reedgrass, Hillebrand's.	U.S.A. (HI).
C*	5	R8	*Calochortus persistens*.	Liliaceae	Mariposa lily, Siskiyou	U.S.A. (CA, OR).
C*	2	R1	*Canavalia pubescens*	Fabaceae	'Awikiwiki	U.S.A. (HI).
C*	8	R1	*Castilleja christii*	Scrophulariaceae	Paintbrush, Christ's	U.S.A. (ID).
C*	9	R4	*Chamaecrista lineata* var. *keyensis*.	Fabaceae	Pea, Big Pine partridge.	U.S.A. (FL).
C*	12	R4	*Chamaesyce deltoidea pinetorum*.	Euphorbiaceae	Sandmat, pineland	U.S.A. (FL).
C*	9	R4	*Chamaesyce deltoidea serpyllum*.	Euphorbiaceae	Spurge, wedge	U.S.A. (FL).
C*	6	R8	*Chorizanthe parryi* var. *fernandina*.	Polygonaceae	Spineflower, San Fernando Valley.	U.S.A. (CA).
C*	2	R4	*Chromolaena frustrata*	Asteraceae	Thoroughwort, Cape Sable.	U.S.A. (FL).
C*	2	R4	*Consolea corallicola*	Cactaceae	Cactus, Florida semaphore.	U.S.A. (FL).
C*	5	R4	*Cordia rupicola*	Boraginaceae	No common name	U.S.A. (PR), Anegada.
C*	2	R1	*Cyanea asplenifolia*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea calycina*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea kunthiana*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea lanceolata*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea obtusa*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea tritomantha*	Campanulaceae	'Aku	U.S.A. (HI).
C*	2	R1	*Cyrtandra filipes*	Gesneriaceae	Ha'iwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra kaulantha*	Gesneriaceae	Ha'iwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra oxybapha*	Gesneriaceae	Ha'iwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra sessilis*	Gesneriaceae	Ha'iwale	U.S.A. (HI).
C*	3	R4	*Dalea carthagenensis* var. *floridana*.	Fabaceae	Prairie-clover, Florida	U.S.A. (FL).
C*	5	R5	*Dichanthelium hirstii*	Poaceae	Panic grass, Hirsts'	U.S.A. (DE, GA, NC, NJ).
C*	5	R4	*Digitaria pauciflora*	Poaceae	Crabgrass, Florida pineland.	U.S.A. (FL).
C*	3	R2	*Echinomastus erectocentrus* var. *acunensis*.	Cactaceae	Cactus, Acuna	U.S.A. (AZ), Mexico.
C*	8	R2	*Erigeron lemmonii*	Asteraceae	Fleabane, Lemmon	U.S.A. (AZ).
C*	2	R1	*Eriogonum codium*	Polygonaceae	Buckwheat, Umtanum Desert.	U.S.A. (WA).
C*	6	R8	*Eriogonum corymbosum* var. *nilesii*.	Polygonaceae	Buckwheat, Las Vegas.	U.S.A. (NV).
C	5	R8	*Eriogonum diatomaceum*.	Polygonaceae	Buckwheat, Churchill Narrows.	U.S.A. (NV).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	5	R8	*Eriogonum kelloggii*	Polygonaceae	Buckwheat, Red Mountain.	U.S.A. (CA).
C*	2	R1	*Festuca hawaiiensis*	Poaceae	No common name	U.S.A. (HI).
C*	11	R2	*Festuca ligulata*	Poaceae	Fescue, Guadalupe	U.S.A. (TX), Mexico.
C*	2	R1	*Gardenia remyi*	Rubiaceae	Nanu	U.S.A. (HI).
C*	8	R1	*Geranium hanaense*	Geraniaceae	Nohoanu	U.S.A. (HI).
C*	8	R1	*Geranium hillebrandii*	Geraniaceae	Nohoanu	U.S.A. (HI).
C*	5	R4	*Gonocalyx concolor*	Ericaceae	No common name	U.S.A. (PR).
C	2	R4	*Harrisia aboriginum*	Cactaceae	Pricklyapple, aboriginal (shellmound applecactus).	U.S.A. (FL).
C*	5	R8	*Hazardia orcuttii*	Asteraceae	Orcutt's hazardia	U.S.A. (CA), Mexico.
C*	2	R1	*Hedyotis fluviatilis*	Rubiaceae	Kampua'a	U.S.A. (HI).
C*	8	R4	*Helianthus verticillatus*	Asteraceae	Sunflower, whorled	U.S.A. (AL, GA, TN).
C*	2	R2	*Hibiscus dasycalyx*	Malvaceae	Rose-mallow, Neches River.	U.S.A. (TX).
PE	2	R6	*Ipomopsis polyantha*	Polemoniaceae	Skyrocket, Pagosa	U.S.A. (CO).
C*	5	R8	*Ivesia webberi*	Rosaceae	Ivesia, Webber	U.S.A. (CA, NV).
C*	3	R1	*Joinvillea ascendens ascendens*.	Joinvilleaceae	'Ohe	U.S.A. (HI).
C*	2	R1	*Korthalsella degeneri*	Viscaceae	Hulumoa	U.S.A. (HI).
C*	5	R4	*Leavenworthia crassa*	Brassicaceae	Gladecress, unnamed	U.S.A. (AL).
C	3	R4	*Leavenworthia exigua* var. *laciniata*.	Brassicaceae	Gladecress, Kentucky	U.S.A. (KY).
C*	2	R2	*Leavenworthia texana*	Brassicaceae	Gladecress, Texas golden.	U.S.A. (TX).
C*	8	R4	*Lesquerella globosa*	Brassicaceae	Bladderpod, Short's	U.S.A. (IN, KY, TN).
C*	5	R4	*Linum arenicola*	Linaceae	Flax, sand	U.S.A. (FL).
C*	3	R4	*Linum carteri* var. *carteri*.	Linaceae	Flax, Carter's small-flowered.	U.S.A. (FL).
C*	2	R1	*Melicope christophersenii*.	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope hiiakae*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope makahae*	Rutaceae	Alani	U.S.A. (HI).
C	3	R8	*Mimulus fremontii* var. *vandenbergensis*.	Phrymaceae	Monkeyflower, Vandenberg.	U.S.A. (CA).
C*	2	R1	*Myrsine fosbergii*	Myrsinaceae	Kolea	U.S.A. (HI).
C*	2	R1	*Myrsine vaccinioides*	Myrsinaceae	Kolea	U.S.A. (HI).
C*	8	R5	*Narthecium americanum*.	Liliaceae	Asphodel, bog	U.S.A. (DE, NC, NJ, NY, SC).
C*	2	R1	*Nothocestrum latifolium*.	Solanaceae	'Aiea	U.S.A. (HI).
C*	2	R1	*Ochrosia haleakalae*	Apocynaceae	Holei	U.S.A. (HI).
C*	3	R2	*Pediocactus peeblesianus* var. *fickeiseniae*.	Cactaceae	Cactus, Fickeisen plains.	U.S.A. (AZ).
PT	2	R6	*Penstemon debilis*	Scrophulariaceae	Beardtongue, Parachute.	U.S.A. (CO).
C*	9	R6	*Penstemon scariosus* var. *albifluvis*.	Scrophulariaceae	Beardtongue, White River.	U.S.A. (CO, UT).
C*	2	R1	*Peperomia subpetiolata*.	Piperaceae	'Ala 'ala wai nui	U.S.A. (HI).
C	5	R8	*Phacelia stellaris*	Hydrophyllaceae	Phacelia, Brand's	U.S.A. (CA), Mexico.
PT	8	R6	*Phacelia submutica*	Hydrophyllaceae	Phacelia, DeBeque	U.S.A. (CO).
C*	2	R1	*Phyllostegia bracteata*	Lamiaceae	No common name	U.S.A. (HI).
C*	8	R1	*Phyllostegia floribunda*	Lamiaceae	No common name	U.S.A. (HI).
C*	9	R1	*Physaria douglasii tuplashensis*.	Brassicaceae	Bladderpod, White Bluffs.	U.S.A. (WA).
C*	8	R4	*Platanthera integrilabia*.	Orchidaceae	Orchid, white fringeless.	U.S.A. (AL, GA, KY, MS, NC, SC, TN, VA).
C*	3	R1	*Platydesma cornuta* var. *cornuta*.	Rutaceae	No common name	U.S.A. (HI).
C*	3	R1	*Platydesma cornuta* var. *decurrens*.	Rutaceae	No common name	U.S.A. (HI).
C*	2	R1	*Platydesma remyi*	Rutaceae	No common name	U.S.A. (HI).
C	2	R1	*Pleomele fernaldii*	Agavaceae	Hala pepe	U.S.A. (HI).
C*	2	R1	*Pleomele forbesii*	Agavaceae	Hala pepe	U.S.A. (HI).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[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					
C*	11	R8	*Potentilla basaltica*	Rosaceae	Cinquefoil, Soldier Meadow.	U.S.A. (NV).
C*	3	R1	*Pseudognaphalium (=Gnaphalium) sandwicensium* var. *molokaiense*.	Asteraceae	‘Ena‘ena	U.S.A. (HI).
C*	3	R1	*Psychotria hexandra* ssp. *oahuensis* var. *oahuensis*.	Rubiaceae	Kopiko	U.S.A. (HI).
C*	2	R1	*Pteralyxia macrocarpa*	Apocynaceae	Kaulu	U.S.A. (HI).
C*	2	R1	*Ranunculus hawaiensis*.	Ranunculaceae	Makou	U.S.A. (HI).
C*	2	R1	*Ranunculus mauiensis*	Ranunculaceae	Makou	U.S.A. (HI).
C*	8	R8	*Rorippa subumbellata*	Brassicaceae	Cress, Tahoe yellow	U.S.A. (CA, NV).
C*	2	R1	*Schiedea pubescens*	Caryophyllaceae	Ma‘oli‘oli	U.S.A. (HI).
C*	2	R1	*Schiedea salicaria*	Caryophyllaceae	No common name	U.S.A. (HI).
C*	5	R8	*Sedum eastwoodiae*	Crassulaceae	Stonecrop, Red Mountain.	U.S.A. (CA).
C*	2	R1	*Sicyos macrophyllus*	Cucurbitaceae	‘Anunu	U.S.A. (HI).
C	12	R4	*Sideroxylon reclinatum austrofloridense*.	Sapotaceae	Bully, Everglades	U.S.A. (FL).
C*	8	R1	*Solanum nelsonii*	Solanaceae	Popolo	U.S.A. (HI).
C	8	R4	*Solidago plumosa*	Asteraceae	Goldenrod, Yadkin River.	U.S.A. (NC).
C*	2	R2	*Sphaeralcea gierischii*	Malvaceae	Mallow, Gierisch	U.S.A. (AZ, UT).
C*	2	R1	*Stenogyne cranwelliae*	Lamiaceae	No common name	U.S.A. (HI).
C*	8	R4	*Symphyotrichum georgianum*.	Asteraceae	Aster, Georgia	U.S.A. (AL, FL, GA, NC, SC).
C*	2	R1	*Zanthoxylum oahuense*.	Rutaceae	A‘e	U.S.A. (HI).
FERNS AND ALLIES:						
C*	8	R1	*Christella boydiae (= Cyclosorus boydiae* var. *boydiae + Cyclosorus boydiae kipahuluensis)*.	Thelypteridaceae	No common name	U.S.A. (HI).
C*	2	R1	*Doryopteris takeuchii*	Pteridaceae	No common name	U.S.A. (HI).
C*	2	R1	*Huperzia (= Phlegmariurus) stemmermanniae*.	Lycopodiaceae	Wawae‘iole	U.S.A. (HI).
C*	3	R1	*Microlepia strigosa* var. *mauiensis (= Microlepia mauiensis)*.	Dennstaedtiaceae	Palapalai	U.S.A. (HI).
C	3	R4	*Trichomanes punctatum floridanum*.	Hymenophyllaceae	Florida bristle fern	U.S.A. (FL).

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:						
Rc	A, U	R8	*Xerospermophilus tereticaudus chlorus*.	Sciuridae	Squirrel, Palm Springs (= Coachella Valley) round-tailed ground.	U.S.A. (CA).
BIRDS:						
E	L	R1	*Loxops caeruleirostris*	Fringillidae	Akekee (honeycreeper).	U.S.A. (HI).
E	L	R1	*Oreomystis bairdi*	Fringillidae	Akikiki (Kauai creeper)	U.S.A. (HI).
CLAMS:						
E	L	R4	*Pleurobema hanleyianum*.	Unionidae	Pigtoe, Georgia	U.S.A. (AL, GA, TN).
SNAILS:						

TABLE 2—ANIMALS AND PLANTS FORMERLY CANDIDATES OR FORMERLY PROPOSED FOR LISTING—Continued

[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.					
E	L	R4	*Pleurocera foremani*	Pleuroceridae	Hornsnail, rough	U.S.A. (AL).
E	L	R4	*Leptoxis foremani (= downei).*	Pleuroceridae	Rocksnail, Interrupted (= Georgia).	U.S.A. (GA, AL).
INSECTS:						
E	L	R1	*Megalagrion nesiotes*	Coenagrionidae	Damselfly, flying earwig Hawaiian.	U.S.A. (HI).
E	L	R1	*Megalagrion pacificum*	Coenagrionidae	Damselfly, Pacific Hawaiian.	U.S.A. (HI).
E	L	R1	*Drosophila attigua*	Drosophilidae	Fly, Hawaiian picture-wing.	U.S.A. (HI).
FLOWERING PLANTS:						
E	L	R1	*Astelia waialealae*	Liliaceae	Pa'iniu	U.S.A. (HI).
E	L	R1	*Canavalia napaliensis*	Fabaceae	'Awikiwiki	U.S.A. (HI).
E	L	R1	*Chamaesyce eleanoriae.*	Euphorbiaceae	'Akoko	U.S.A. (HI).
E	L	R1	*Chamaesyce remyi var. kauaiensis.*	Euphorbiaceae	'Akoko	U.S.A. (HI).
E	L	R1	*Chamaesyce remyi var. remyi.*	Euphorbiaceae	'Akoko	U.S.A. (HI).
E	L	R1	*Charpentiera densiflora.*	Amaranthaceae	Papala	U.S.A. (HI).
E	L	R1	*Cyanea dolichopoda*	Campanulaceae	Haha	U.S.A. (HI).
E	L	R1	*Cyanea eleeleensis*	Campanulaceae	Haha	U.S.A. (HI).
E	L	R1	*Cyanea kolekoleensis*	Campanulaceae	Haha	U.S.A. (HI).
E	L	R1	*Cyanea kuhihewa*	Campanulaceae	Haha	U.S.A. (HI).
E	L	R1	*Cyrtandra oenobarba*	Gesneriaceae	Ha'iwale	U.S.A. (HI).
E	L	R1	*Cyrtandra paliku*	Gesneriaceae	Ha'iwale	U.S.A. (HI).
E	L	R1	*Dubautia imbricata imbricata.*	Asteraceae	Na'ena'e	U.S.A. (HI).
E	L	R1	*Dubautia kalalauensis*	Asteraceae	Na'ena'e	U.S.A. (HI).
E	L	R1	*Dubautia kenwoodii*	Asteraceae	Na'ena'e	U.S.A. (HI).
E	L	R1	*Dubautia plantaginea magnifolia.*	Asteraceae	Na'ena'e	U.S.A. (HI).
E	L	R1	*Dubautia waialealae*	Asteraceae	Na'ena'e	U.S.A. (HI).
E	L	R1	*Geranium kauaiense*	Geraniaceae	Nohoanu	U.S.A. (HI).
E	L	R1	*Keysseria erici*	Asteraceae	No common name	U.S.A. (HI).
E	L	R1	*Keysseria helenae*	Asteraceae	No common name	U.S.A. (HI).
E	L	R1	*Labordia helleri*	Loganiaceae	Kamakahala	U.S.A. (HI).
E	L	R1	*Labordia pumila*	Loganiaceae	Kamakahala	U.S.A. (HI).
T	L	R1	*Lepidium papilliferum*	Brassicaceae	Peppergrass, slickspot	U.S.A. (ID).
E	L	R1	*Lysimachia daphnoides.*	Myrsinaceae	Lehua makanoe	U.S.A. (HI).
E	L	R1	*Lysimachia iniki*	Myrsinaceae	No common name	U.S.A. (HI).
E	L	R1	*Lysimachia pendens*	Myrsinaceae	No common name	U.S.A. (HI).
E	L	R1	*Lysimachia scopulensis.*	Myrsinaceae	No common name	U.S.A. (HI).
E	L	R1	*Lysimachia venosa*	Myrsinaceae	No common name	U.S.A. (HI).
E	L	R1	*Melicope degeneri*	Rutaceae	Alani	U.S.A. (HI).
E	L	R1	*Melicope paniculata*	Rutaceae	Alani	U.S.A. (HI).
E	L	R1	*Melicope puberula*	Rutaceae	Alani	U.S.A. (HI).
E	L	R1	*Myrsine knudsenii*	Myrsinaceae	Kolea	U.S.A. (HI).
E	L	R1	*Myrsine mezii*	Myrsinaceae	Kolea	U.S.A. (HI).
E	L	R1	*Phyllostegia renovans*	Lamiaceae	No common name	U.S.A. (HI).
E	L	R1	*Pittosporum napaliense.*	Pittosporaceae	Ho'awa	U.S.A. (HI).
E	L	R1	*Platydesma rostrata*	Rutaceae	Pilo kea lau li'i	U.S.A. (HI).
E	L	R1	*Pritchardia hardyi*	Asteraceae	Lo'ulu	U.S.A. (HI).
E	L	R1	*Psychotria grandiflora*	Rubiaceae	Kopiko	U.S.A. (HI).
E	L	R1	*Psychotria hobdyi*	Rubiaceae	Kopiko	U.S.A. (HI).
E	L	R1	*Schiedea attenuata*	Caryophyllaceae	No common name	U.S.A. (HI).
E	L	R1	*Stenogyne kealiae*	Lamiaceae	No common name	U.S.A. (HI).
E	L	R1	*Tetraplasandra bisattenuata.*	Araliaceae	No common name	U.S.A. (HI).
E	L	R1	*Tetraplasandra flynnii*	Araliaceae	No common name	U.S.A. (HI).
E	L	R1	*Diellia mannii*	Aspleniaceae	No common name	U.S.A. (HI).
E	L	R1	*Doryopteris angelica*	Pteridaceae	No common name	U.S.A. (HI).

TABLE 2—ANIMALS AND PLANTS FORMERLY CANDIDATES OR FORMERLY PROPOSED FOR LISTING—Continued

[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.					
E	L	R1	*Dryopteris crinalis* var. *podosorus*.	Dryopteridaceae	Palapalai aumakua	U.S.A. (HI).

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