

in the northeastern United States (Halonen 2000, p. 15).

The information presented in the petition suggests that *Usnea longissima* populations are facing increased pressure in California from several factors, including habitat loss and commercial timber harvesting. In the Coast Range of the Pacific Northwest, *U. longissima* seems more limited in occurrences by its inability to easily disperse than by the possible lack of suitable habitat (Keon 2001, p. 92–94). *U. longissima* disperses mostly from small pieces fragmenting from the main plant and being carried off in the wind, by an animal, or by simply falling onto another plant (Pojar and Makinon 1994, p. 503). This lichen has a short dispersal distance, usually less than 5 meters (16 feet) (McCune and Geiser 1997, pp. 301, 307, and 353). Therefore, *U. longissima* recolonization of second growth forests may be more dependent upon proximity to existing *U. longissima* populations than on other habitat characteristics, such as tree age (Keon and Muir 2002, pp. 233–242).

Review of the Petition

The petition states that *Usnea longissima* has been extirpated from much of its former range in western Europe primarily due to intensive even-aged logging and acid rain, and that it is being extirpated in California through habitat disturbance. The petition contends that *U. longissima* is highly dependent on large, mature trees for habitat and that logging of old-growth forest is leading to its extirpation. Our review of the information present in the petition suggests that air quality has also contributed to the extirpation of the *Usnea longissima* in some parts of Europe. The petition requests that the California populations of *U. longissima* be listed under the Act as endangered or threatened.

However, the petition contains no information about whether western Europe or California is a significant portion of the species' range. Therefore, the petition does not provide substantial information that areas in western Europe or California constitute a significant portion of the species' global range. The petition also does not request that we list the species across its range. To list the species in California alone, as requested by the petitioner, we would have to determine that the occurrences in California constitute a Distinct Population Segment. The Act restricts the use of Distinct Population Segments to vertebrate animal species (16 U.S.C. 1532(16); 61 FR 4722; February 7, 1996). *U. longissima* is not a vertebrate animal, and thus we have no authority to list a

distinct population segment of this species. Therefore, the California populations of *U. longissima* are not considered to be a listable entity pursuant to the Act and as a result are ineligible for listing.

Regarding the petitioner's contention that *U. longissima* is dependent on large mature trees, we note that studies addressing *Usnea longissima* distributions in coastal Oregon forests (Keon 2001, pp. 92–94; Keon and Muir 2002, pp. 233–242) and reviews of *U. longissima* occurrences on Pacific Lumber Company (PALCO) lands in northern coastal California (Leppig 2003, pp. 1–3) suggest that *U. longissima* occurrences may be more dependent on the species' ability to disperse than on the age of the host trees. Leppig's review (2003, p. 2) of *U. longissima* on PALCO lands determined that it occurs on all tree species present in the stands and is relatively abundant in younger, 20- to 30-year-old forest stands. Keon and Muir (2002, pp. 233–242) found that *U. longissima* transplants in young stands grew harder than transplants in an old growth setting. Additionally, our reviews of PALCO timber harvest plans suggest that *U. longissima* is relatively abundant in watersheds that have been previously harvested (Leppig 2003, p. 2), suggesting that *U. longissima* populations are resilient. In summary, although Pojar and Makinon (1994, p. 503) found that the healthiest populations of *U. longissima* are in old-growth forests, this slow-growing lichen is not restricted to such an age class. In addition, contrary to the implications in the petition, where the species has been studied in the Pacific Northwest, it occurs with relative abundance in younger 20- to 30-year-old forest stands (Leppig 2003, pp. 1–3) and in watersheds that have undergone forest harvests (Leppig 2003, p. 2).

Finding

We reviewed the petition to list *Usnea longissima* in California and the literature cited in the petition, and we evaluated that information in relation to other pertinent literature and information available to us. After this review and evaluation, we find that there is not substantial scientific or commercial information to demonstrate that the California populations of *U. longissima* are a listable entity, and as a result, we have determined that the petitioned action is not warranted. Although we will not be commencing a status review in response to this petition, we encourage interested parties to continue to gather data that will assist with the conservation of the species.

References Cited

A complete list of all references cited herein is available upon request from the Arcata Fish and Wildlife Office (see ADDRESSES).

Author

The primary authors of this notice are the staff of the Arcata Fish and Wildlife Office (see ADDRESSES).

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

Dated: September 20, 2006.

Marshall P. Jones, Jr.,

Acting Director, Fish and Wildlife Service.

[FR Doc. E6–15876 Filed 9–27–06; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AU66

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To Delist the Idaho Springsnail; 12-Month Finding on a Petition To List the Jackson Lake Springsnail, Harney Lake Springsnail, and Columbia Springsnail; and Proposed Rule To Remove the Idaho Springsnail From the List of Threatened and Endangered Wildlife

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of two 12-month petition findings and a proposed rule to delist the Idaho springsnail (*Pyrgulopsis idahoensis*).

SUMMARY: We, the U.S. Fish and Wildlife Service (USFWS, Service, or we), under the Endangered Species Act of 1973, as amended (Act), announce combined 12-month findings on a petition to delist the endangered Idaho springsnail (*Pyrgulopsis idahoensis*) and a petition to list the Jackson Lake springsnail (*P. robusta*), Harney Lake springsnail (*P. hendersoni*), and Columbia springsnail (*P. species A* (unnamed)). Evidence collected subsequent to the December 14, 1992, listing (USFWS 1992, pp. 59244–59257 (57 FR 59244)) of the Idaho springsnail indicates it no longer constitutes a distinct species. It is now described as the Jackson Lake springsnail (*P. robusta*), a single taxon, composed of four previously distinct springsnail species (Idaho, Jackson Lake, Harney Lake, and Columbia springsnails), and therefore we are proposing to remove

the Idaho springsnail from the Federal List of Endangered and Threatened Wildlife. We evaluated the best available scientific and commercial information regarding the status of, and threats to, the newly described *P. robusta*, and determined that the threats to the species do not warrant its listing at this time. Additionally, based on our status review of *P. robusta*, we also find that listing the Jackson Lake springsnail, Harney Lake springsnail, and Columbia springsnail as separate species is not warranted.

DATES: The 12-month findings on the delisting and listing petitions announced in this notice were made on September 28, 2006. We request that new information be submitted to us concerning the status of, or threats to, *Pyrgulopsis robusta*, whenever it becomes available.

We will accept comments from all interested parties regarding the proposal to delist the Idaho springsnail until November 27, 2006. We must receive requests for public hearings on or before November 13, 2006.

ADDRESSES: Comments may be submitted on the proposed rule to delist the Idaho springsnail by any of the following methods. Please include RIN 1018-AU66 in any subject line.

- *E-mail:*
fws1srbocomments@fws.gov.
- *Fax:* (208) 378-5262.
- *Hand carry, Postal Delivery, or Courier:* Snake River Fish and Wildlife Office, U.S. Fish and Wildlife Service, 1387 S. Vinnell Way, Room 368, Boise, ID 83709.
- *Federal Rulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

Please see the Public Comments Solicited section below for file format and other information about electronic filing.

FOR FURTHER INFORMATION CONTACT: The Snake River Fish and Wildlife Office by mail at the above address; by telephone at 208/378-5243; by facsimile at 208/378-5262; or by electronic mail at: fw1srbocomment@fws.gov.

SUPPLEMENTARY INFORMATION:

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, Native American Tribes, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited.

Please note that comments merely stating support or opposition to the actions under consideration without providing supporting information, although noted, will not be considered in making a determination, because section 4(b)(1)(A) of the Act directs that determinations as to whether any species is a threatened or endangered species shall be made "solely on the basis of the best scientific and commercial data available."

You may submit materials concerning this proposal by any one of several methods (see **ADDRESSES** section). Please submit Internet comments to fws1srbocomments@fws.gov in ASCII file format and avoid the use of special characters or any form of encryption. Please also include "RIN 1018-AU66" in your e-mail subject header and your name and return address in the body of your message. If you do not receive a confirmation from the system that we have received your Internet message, contact us directly (see **ADDRESSES**). Please note that the Internet address fws1srbocomments@fws.gov will be unavailable at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home addresses from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment, but you should be aware that the Service may be required to disclose your name and address pursuant to the Freedom of Information Act. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and other information received, as well as supporting information used to write this rule, will be available for public inspection, by appointment, during normal business hours at the above address. In making a final decision on this proposal, we will take into consideration any additional information we receive. Such communications may lead to a final regulation that differs from this proposal.

Background

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*) requires that, for any petition to revise the List of Threatened and Endangered Species that contains substantial scientific and commercial information that suggests a change in status may be warranted, we make a finding within 12 months of the date of the receipt of the petition on whether the petitioned action is: (a) Not warranted; (b) warranted; or (c) warranted, but the immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether a species is threatened or endangered, and expeditious progress is being made to add or remove qualified species from the List of Threatened and Endangered Species. Such 12-month findings are to be promptly published in the **Federal Register**. In addition, section 4(b)(3)(C) of the Act requires that a petition for which the requested action is found to be warranted but precluded shall be treated as though resubmitted on the date of such finding (i.e., requiring a subsequent finding to be made within 12 months).

Previous Federal Action

We published the final rule listing the Idaho springsnail as endangered on December 14, 1992 (57 FR 59244). In that rule, we described range reduction, continued adverse habitat modification, deteriorating water quality from multiple sources, and the appearance of the invasive New Zealand mudsnail (*Potamopyrgus antipodarum*) as the major threats to the species. We have not designated critical habitat for the Idaho springsnail.

On June 28, 2004, we received a petition from the Idaho Office of Species Conservation and the Idaho Power Company (IPC) requesting that the Idaho springsnail be delisted based on a recent taxonomic revision of the species. The petitioners also provided new Idaho springsnail scientific information, and contrasted this new information with information used in the 1992 Idaho springsnail listing decision (57 FR 59244). The petitioners stated that most, if not all, threats to Idaho springsnail identified in the 1992 listing rule have been eliminated, are being actively addressed by State and private entities, or are not relevant, based on new scientific information.

On August 5, 2004, we received a petition from Dr. Peter Bowler, the Biodiversity Conservation Alliance, the Center for Biological Diversity, the Center for Native Ecosystems, the

Western Watersheds Project, and the Xerces Society, requesting that the Jackson Lake springsnail, Harney Lake springsnail, and Columbia springsnail be listed as either threatened or endangered species, and as either individual species or combined as the new species, *Pyrgulopsis robusta*. This listing petition cited habitat loss and degradation from development impacting springs, domestic livestock grazing, and groundwater withdrawal, among other factors, as threats to the continued existence of these three springsnail species. The listing petition also discussed the recent springsnail taxonomic revision and acknowledged that the Jackson Lake springsnail, Harney Lake springsnail, Columbia springsnail, and Idaho springsnail may be one species (*P. robusta*), but contended that, whether considered individually or as one species, all four springsnails warranted the protection of the Act.

On April 20, 2005, we published combined 90-day petition findings (USFWS 2005, pp. 20512–20514 (70 FR 20512)), stating that both petitions provided substantial information suggesting that delisting of the Idaho springsnail, or listing of Jackson Lake springsnail, Harney Lake springsnail, and Columbia springsnail, may be warranted.

Species Information

The Idaho springsnail (*Pyrgulopsis idahoensis*; Hydrobiidae) was first described by Pilsbry (1933, pp. 11–12) and placed in the genus *Amnicola*. Greg and Taylor (1965, pp. 103–110) established the new genus *Fontelicella* and then placed *P. idahoensis* in the subgenus *Natricola*, created in 1965 (Greg and Taylor 1965, pp. 108–109). *Natricola* contained the Idaho springsnail, the Harney Lake springsnail (*P. hendersoni*), and the Jackson Lake springsnail (*P. robusta*). After several taxonomic revisions, the subgenus *Natricola* was placed in synonymy with the genus *Pyrgulopsis* by Hershler and Thompson (1987, p. 29). *Pyrgulopsis* is the largest genus of freshwater mollusks in North America, comprised of over 120 described species (Liu and Hershler 2005, p. 284). The greatest diversity of the genus occurs in the Great Basin of the western United States (Hershler and Sada 2000, p. 367; Hershler and Sada 2002, p. 255).

In 2004, Hershler and Liu (2004, pp. 78–79) revised the taxonomic status of four springsnails *Pyrgulopsis idahoensis*, *P. hendersoni*, *P. robusta*, and the Columbia springsnail (*P. species A* (unnamed)), by placing all four springsnails into the oldest available

taxon of the four revised species, *P. robusta* (Jackson Lake springsnail, Walker 1908, p. 97). All four species were considered members of the subgenus *Natricola*. Members of the subgenus *Natricola* are very similar in size and shape, being distinguished primarily by the morphology of the shell. The authors reviewed morphological characters, mitochondrial DNA sequences, and nuclear DNA sequences to establish the need for taxonomic status change.

Several morphological metrics, including the position of the callus (thickened portion) on the operculum (serves as a cover for the opening in the shell); the shape of the central cusp of the central teeth; the number of cusps on central teeth; notching of inner marginal teeth; number of cusps on outer marginal teeth; the male penile features; and female genitals, did not differ significantly among the four springsnail species (Hershler and Liu 2004, pp. 70–75). Five shell parameters were significantly heterogeneous in a comparison of the four springsnail species. In only one case did a single springsnail species differ significantly from the other three; the Idaho springsnail differed significantly from the other three springsnail species for the ratio of shell height to height of body whorl (Hershler and Liu 2004, p. 71).

To construct species topologies, Hershler and Liu (2004, pp. 67–69) sequenced selected genes of four springsnail species, *Pyrgulopsis robusta*, *P. idahoensis*, *P. hendersoni*, and *P. species A* (unnamed), as well as congeners *P. imperialis*, *P. intermedia*, *P. kolobensis*, and *P. species B* (unnamed). The mitochondrial DNA data revealed little difference in the partial CO1 gene among the four springsnail species. Differences ranged from 0.0 to 0.8 percent (0 to 5 base pairs) among the four springsnail species and 2.6 to 6.9 percent (16 to 43 base pairs) with congeners. Nuclear DNA data revealed differences in the ITS–1 sequences within the four springsnail species that were substantially smaller (0.0 to 0.6 percent) than differences among other congeners (5.9 to 20.4 percent) (see Figure 8 in Hershler and Liu 2004, pp. 73–75). These two lines of evidence show that DNA sequence differences among the four springsnail species are very small compared to differences with other recognized taxa within the genus *Pyrgulopsis*.

Hershler and Liu (2004, p. 77) concluded “three independent data sets (morphology, mitochondrial, and nuclear DNA sequences) congruently

suggest that these four *Natricola* snails do not merit recognition as distinct species according to various currently applied concepts of this taxonomic rank.” The methods employed by Hershler and Liu (2004, pp. 67–70) are considered contemporary in the field of genetics and are consistent with those used by numerous authors reconstructing phylogenies based on molecular evidence in general (Raahauge and Kristensen 2000, pp. 87–89; Jones *et al.* 2001, pp. 281; Attwood *et al.* 2003, pp. 265–266), and with western hydrobiid snails in particular (Hershler *et al.* 2003, pp. 358–359; Liu *et al.* 2003, pp. 2772–2775; Hurt 2004, pp. 1174–1177; Liu and Hershler 2005, p. 285). Further, it is the position of the American Malacological Society that the Hershler and Liu (2004) revised taxonomy sets the standard for understanding this group of springsnails (Leal 2004). Hershler and Liu (2004, pp. 66–81) represents the best available scientific and commercial data on the taxonomic status of the four petitioned springsnails, and we therefore will refer to the four former springsnail species as *Pyrgulopsis robusta* for the rest of this document.

Biology

Pyrgulopsis robusta shells are large for the genus, usually ovate (oval) to narrow-conic (cone shaped), rarely subglobose (not quite rounded), with whorls weakly to moderately convex (curving outward). The shell is clear-white and the periostracum (outer layer of the shell matrix) is tan. The aperture is ovate and weakly angled above. The inner lip is complete in larger specimens. The penial lobe and filament are about equal in length. The dorsal proximal lobule is well developed, usually overlapping the base of the filament and often borne on a weak proximal swelling. The terminal gland is elongate and transverse. The dorsal distal lobule is well developed and is usually bearing one or a series of small glands. The ventral lobule is well developed and bears a large gland (Hershler and Liu 2004, p. 79).

Information available to describe the life history of *Pyrgulopsis robusta* varies widely. The species is hypothesized to primarily feed on periphyton (*i.e.*, diatoms and algae), which covers the surface of most benthic (submerged bottom) substrates. Although little specific information exists regarding reproductive strategies of *P. robusta*, members of the genus *Pyrgulopsis* are generally dioecious (*i.e.*, male and female individuals) (Dillon 2000, pp. 102–103; Lysne 2003, p. 80). *Pyrgulopsis robusta* is hypothesized to

reproduce once in an annual life cycle, and laboratory studies estimate average survival to be 382 days (Lysne 2003, p. 82). However, field data show that not all *P. robusta* die within a year (Finni 2003a, pp. 3–5), a life history pattern suggested by Dillon (2000, p. 162) to be exhibited by many populations, allowing extended survivorship and multiple reproductive events. Additional *P. robusta* life history information regarding reproduction and growth rates can be found in the following references: Finni 2003a, pp. 3–5; Lysne 2003, pp. 24, 36, 38, 79–81; Riley *et al.* 2003, p. 33; Dillon 2000, p. 103; and, Hershler 1994, pp. 1–119.

Habitat

Species in the genus *Pyrgulopsis* require permanent fresh waters (Taylor 1985, pp. 265, 276; Hershler 1998, p. 1; Hershler and Sada 2002, p. 255). *Pyrgulopsis robusta* utilizes a wide range of flow conditions and habitats. For example, *P. robusta* has been found in the mainstem Snake River, Idaho, in various habitats; in C.J. Strike and Swan Falls Reservoirs, Idaho (Clark 2005); and in two springs that flow through Yellowstone National Park and John D. Rockefeller National Parkway in Wyoming: Marmot Spring, a relatively stable groundwater-fed spring, and Polecat Creek, a geothermal spring (Riley 2005a, pp. 1, 8; Hall *et al.* 2003, p. 408). In southeastern Oregon, *P. robusta* primarily occurs in cold springs and spring pools of variable size (Frest and Johannes 1995, p. 196), but is also found in the South Fork Malheur River (Hershler and Liu 2004, p. 67). Although *P. robusta* evolved in prehistoric Lake Idaho (Taylor 1982, p. 2; Taylor 1985, pp. 288, 309), the species presently occurs more frequently and abundantly in river habitat than in lake or reservoir habitat (Clark 2005).

Pyrgulopsis robusta is found on a wide range of substrates in the Snake and Columbia Rivers, from silt and pebbles to cobbles and boulders, but in the Snake River the species achieves highest density on gravel to cobble substrates (Stephenson *et al.* 2004, A3 pp. 1–4, A4 pp. 1–4). In Southeastern Oregon, the species is generally found on coarse sand to cobble substrates but may also be associated with the submerged aquatic plant genus *Rorippa* (Frest and Johannes 1995, p. 196).

Field and laboratory information indicate *Pyrgulopsis robusta* has a wide temperature tolerance (Stephenson and Bean 2003, pp. A1, A2; Stephenson *et al.* 2004, A3 pp. 1–4, A4 pp. 1–4; Lysne 2003, p. 27). *Pyrgulopsis robusta* has been documented to survive and grow at temperatures that exceeded the State of

Idaho's water temperature criteria for cold-water life of 66 degrees Fahrenheit (F) (19 degrees Celsius (C)) mean daily and 72 degrees F (22 degrees C) maximum daily water temperatures (Lysne 2003, pp. 27–29). *Pyrgulopsis robusta* have been routinely collected in the Snake River at water temperatures greater than 68 degrees F (20 degrees C) (Stephenson and Bean 2003, pp. A1, A2; Stephenson *et al.* 2004, A3 pp. 1–4, A4 pp. 1–4). In Wyoming, high numbers of *P. robusta* have been collected in Polecat Creek, a geothermal spring creek with temperatures ranging from approximately 57.2 degrees F (14 degrees C) in winter to 75.2 degrees F (24 degrees C) in summer (Hall *et al.* 2003, p. 408). Other variables that potentially influence *P. robusta* habitat selection and use have not been well documented.

Range and Distribution

Pyrgulopsis robusta is now comprised of four geographically isolated populations that include the northwestern Wyoming population, the Snake River population in Idaho, the Columbia River population in Oregon and Washington, and the Oregon closed-basin population (Hershler 1994, p. 91; Hershler 1998, p. 99; Riley *et al.* 2003, p. 6; Frest 2005a; Riley 2005b). In Wyoming, *P. robusta* is currently known from only two locations in Yellowstone National Park and John D. Rockefeller National Parkway. There have been past collections at other sites, and *P. robusta* may be found at additional locations in the future. Recent surveys have failed to locate the species in Jackson Lake (Riley 2005b), the type locality of *P. robusta* as described by Walker in 1908.

In southeastern Oregon, *Pyrgulopsis robusta* occurs in few locations (six or fewer) in the Oregon Interior Basin, in isolated cold springs and spring pools (Frest and Johannes 1995, p. 196), and in the South Fork Malheur River, a tributary to the Snake River (Hershler and Liu 2004, p. 67), in Harney and Lake Counties. *Pyrgulopsis robusta* was historically found along the shores of Malheur and Harney Lakes (Frest and Johannes 1995, p. 196) and was associated with open water habitats (as opposed to wetland habitats with emergent vegetation) 8,000 to 10,000 years ago (Wriston 2003, p. 28). *Pyrgulopsis robusta* is not known to currently exist in Harney or Malheur Lakes, and it is uncertain when *P. robusta* last existed there (Frest and Johannes 1995, p. 196). Many isolated springs and other aquatic habitats of Utah, Nevada, and Idaho in the Great Basin, including parts of southeastern Oregon, have been surveyed specifically

for springsnails, but no additional *P. robusta* have been located (Hershler 1998, p. 3; Hershler and Sada 2002, p. 259).

In the Snake River, *Pyrgulopsis robusta* is known to occur at numerous locations along a stretch of 214 river miles (344 kilometer (km)) between river mile (rm) 340 (river kilometer mile (rkm) 547) and rm 554 (rkm 892). There have been at least 174 collections from this reach of river and the extent of *P. robusta* is believed to be well defined and relatively abundant. The distribution of *P. robusta* in the Columbia River is less well known than in the Snake River, particularly in the Hanford Reach below Priest Rapids Dam. In the Columbia River, *P. robusta* is known from 17 locations, beginning at approximately rm 20 (rkm 32) and continuing for nearly 400 miles (649 km) upstream to just below Priest Rapids Dam (Frest 2005a). Although there have been several hundred invertebrate samples collected in the Columbia River over the past several years, *P. robusta* has been found only in a few of these samples (Frest 2005a).

Status Review Process

On April 20, 2005, we initiated combined 12-month status reviews (70 FR 20512) of the petitioned springsnails, as well as a 5-year review of the Idaho springsnail under section 4(c)(2)(A) of the Act, and solicited additional information from the public on the biology, ecology, distribution and status, threats affecting the petitioned springsnail species, and any ongoing or planned conservation measures.

During the 60-day public comment period, we contacted numerous Federal and State resource agencies, interested Tribal governments, and County governments. On June 7, 2005, we attended an information exchange meeting with the State of Idaho Office of Species Conservation, Idaho Department of Fish and Game (IDFG), Idaho Department of Environmental Quality (IDEQ), U.S. Bureau of Reclamation (BOR), U.S. Bureau of Land Management (BLM), and others. After this information exchange meeting, our staff assimilated and analyzed all the new information submitted during the 60-day public comment period, along with the existing information already obtained from published scientific literature, unpublished technical documents, and written and personal communications. As part of our routine Status Review process, we took this synthesized information and created a document titled: *Draft Best Available Biological Information for Four Petitioned Springsnail Species from*

Idaho, Oregon, Washington, and Wyoming (Draft BAI). The Draft BAI represented our comprehensive, best available scientific and commercial information on the petitioned springsnails.

On August 3, 2005, through a widely distributed outreach effort that included a news release, Dear Interested Party letter, posting on the Service's Web site, and a request for peer review, we opened an additional 30-day public and peer review comment period on the Draft BAI. After the public and peer review, Service staff incorporated the additional information and technical corrections received, and wrote *Version 2.0 Best Available Biological Information for Four Petitioned Springsnail Species from Idaho, Oregon, Washington, and Wyoming (BAI)*. The revised BAI constituted the peer-reviewed state of knowledge with regard to the taxonomy, biology, ecology, distribution, and status of the four petitioned springsnail species, now combined as *Pyrgulopsis robusta*, and was used throughout the remainder of the Status Review process as the primary source of best available scientific and commercial data.

The Service utilized a structured decision making model to assess the available data. Based on an early assessment of the degree of uncertainty surrounding the population trends and conservation status of *Pyrgulopsis robusta*, the Service used two panels to inform our recommended course. The first panel (Expert Panel) was made up of six scientists from outside the Service with expertise in relevant fields, including snail biology and ecology, community ecology, population ecology, stream ecology, aquatic ecotoxicology, and regional water quality. This Expert Panel met on October 18–19, 2005, to discuss the strengths and weaknesses of the various data, hypotheses, and opinions relative to the current status of *P. robusta*. The Expert Panel only addressed the scientific aspects of risk and threats, and estimated the probable extinction risk to *P. robusta*. A second "Managers Panel" of five Service managers and senior biologists met on October 20–21, 2005, to consider the Expert Panel's input and all other information necessary to conduct an extinction risk assessment of *P. robusta*. Information generated from these two Panels was used in the Service's status review to assess threats to, and evaluate the listing status of, *P. robusta*. Further details about the structured decision making process used by the two panels are documented in our administrative record for this proposed rule.

Inspection of the petition to delist the Idaho springsnail, the petition to list the Jackson Lake, Harney Lake, and Columbia springsnails, and the supporting information, administrative finding, and other relevant materials may be made in person, by appointment, at the address listed above (see **ADDRESSES**).

Summary of Factors Affecting the Species

Section 4 of the Act and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for listing, reclassifying, and delisting species. A species may be listed as threatened or endangered if one or more of the five factors described in section 4(a)(1) of the Act threaten the continued existence of the species. A species may be delisted, according to 50 CFR 424.11(d), if the best scientific and commercial data available substantiate that the species is neither endangered nor threatened because of: (1) Extinction; (2) recovery; or (3) error in the original data, or the data analysis, used for classification of the species. For species that are being considered for delisting, the analysis of threats must include an evaluation of threats that existed at the time of listing and those that currently exist or that could, with a reasonable degree of likelihood, potentially affect the species in the foreseeable future after its delisting and the consequent removal of the Act's protections.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The 1992 final listing rule (57 FR 59244) described activities such as proposed large hydroelectric dam developments, peak-loading operations of existing hydroelectric water projects, small hydroelectric developments, water pollution, and water diversions whose cumulative effects threatened the habitat and fragmented populations of the Idaho springsnail (*Pyrgulopsis idahoensis*). After reviewing the best available scientific and commercial information regarding present or threatened destruction, modification, or curtailment of the habitat or range of *P. robusta*, we determined that the principal habitat-related threats are not proceeding at a rate that will threaten the continued existence of the species within the foreseeable future.

Dams and Reservoirs

Our 1992 listing of the Idaho springsnail was based on information that indicated that the species was found only in permanent flowing waters

of the mainstem Snake River, and that its historic range had been reduced nearly 80 percent, in large part by dam and reservoir development and operations.

Populations of *Pyrgulopsis robusta* have been collected from various habitats, including springs, river reaches, and both lake and reservoir locations (Bickell 1977, p. 33; Hershler 1998, p. 99; Richards and Lester 2002, pp. 6–7; Stephenson *et al.* 2004, pp. 11, 21). In the Snake River in Idaho, where *P. robusta* occurs over a range of 214 river miles (344 km), the greatest number of live collections and the highest percentages of *P. robusta* occurrence are generally found in flowing waters influenced by reservoirs (Clark 2005). While extensive surveys conducted in downstream reaches (*i.e.*, below Hells Canyon) of the Snake River (Shinn *et al.* 2001, pp. 80–82; Finni 2003b, p. 1; Richards *et al.* 2005, pp. 4–5) and Columbia River basins (Frest and Johannes 1995, p. 203) have not documented the presence of springsnails, springsnails have been known to persist in habitats associated with reservoirs (*i.e.*, C.J. Strike and Swan Falls). At the upstream end of their range in C.J. Strike Reservoir, abundant numbers of springsnails are located at the mouth of a small tributary (*i.e.*, main-pool) and on the gravel shores of the Bruneau River Arm, where comparatively cool and flowing waters (*i.e.*, relative to the Snake River) of the Bruneau River run into C.J. Strike Reservoir (Stephenson *et al.* 2004, p. 21). In Swan Falls Reservoir, *P. robusta* are found in the headwaters (*i.e.*, the nebulous upstream end of a reservoir and downstream end of free-flowing river) of the reservoir, but only one snail has been collected (at rm 460; rkm 740) in the main pool from the dam to 7 miles (11.2 km) upstream of the dam (Clark 2005).

At the downstream end of *Pyrgulopsis robusta*'s range in Idaho, the species' known distribution ends immediately above the Hells Canyon Complex at the headwaters of Brownlee Reservoir (approximately rm 340 (rkm 547)). The Hells Canyon Complex includes three large reservoirs (Brownlee, Oxbow, and Hells Canyon) that are deep (two have very steep sides) and whose waters fluctuate on both a daily and annual basis (Esch 2005). Surveys by the IPC in and below the Hells Canyon Complex have not yielded *P. robusta* (Finni 2003b, pp. 9, 19; Meyers and Foster 2003, pp. 17–18; Richards *et al.* 2005, pp. 71–78, 103–149). The particular habitat conditions of these reservoirs may not be able to support *P. robusta* and may also prevent successful

downstream migration to suitable habitat below the Hells Canyon Complex (Shinn *et al.*, 2001, p. 20; Meyers and Foster 2003, pp. 18–20).

In Oregon and Washington, *Pyrgulopsis robusta* has been documented in the lower Columbia River below Dalles and John Day Dams and in their pools (Frest 2005a). These collections were in areas where the flow is greater and the river is shallower than in the reservoir (Frest 2005a). In southeastern Oregon, *P. robusta* was found in the south fork of the Malheur River (Hershler and Liu 2004, p. 79; Frest 2005a). These collections were reported to have been taken 60 miles upstream of Warm Springs Dam in an area of spring up-welling from the hyporheic zone (area below the streambed where water passes through spaces between the rock and cobble) (Frest 2005a, b).

Our current status review indicates that *Pyrgulopsis robusta* is not restricted to permanent free-flowing water; the species also occurs in slower moving reservoir reaches and also in areas with and without spring inflow or upwelling occurrences. Our previous concern, as stated in the 1992 listing rule, regarding the historic range of the species in the Snake River having been reduced nearly 80 percent by dams and reservoirs, does not apply to *P. robusta*. New information collected on the Idaho springsnail population's life history, distribution, and status has been incorporated into this status review, together with information about the three other *P. robusta* populations (Jackson Lake, Harney Lake, and Columbia River). Much of this information has been collected during aquatic and mollusk surveys conducted by the IPC in the Snake River and Frest (2005 a, b) for the Columbia River and southeast Oregon populations. The IPC has been collecting information on Idaho springsnail populations throughout the Snake River since 1995. Based on the results of these surveys and laboratory studies, we now have a much better understanding of the basic life history as well as current distribution and status of *P. robusta* in the Snake River. These surveys have documented that *P. robusta* is more widely distributed in the Snake River than originally described in the 1992 listing rule. IPC biologists have surveyed over 400 river miles (644 km) in the Snake River and have documented the species at over 174 known locations over 214 river miles (344 km), between rm 340 (rkm 547) and rm 554 (rkm 892) (Clark 2005), a nearly 500 percent increase, or 179 river miles (292 km), of its known range. In

summary, *P. robusta* has been determined to be more widely distributed and to occur on a much wider diversity of substrate types and sizes, and in a greater variety of aquatic habitats than was known at the time of the Idaho springsnail's listing in 1992. The species occurs throughout long reaches of the Snake River and Columbia Rivers in areas that are influenced by dams and reservoirs.

The 1992 listing rule discussed “peak-loading, the practice of artificially raising and lowering river levels to meet short-term electrical needs by local run-of-the-river hydroelectric projects,” as a threat that “may adversely affect three known populations of the Idaho springsnail” (57 FR 59252). Certain hydroelectric power generating operational scenarios (e.g., water storage, diversion, and peak-loading) have been documented to have adverse impacts on aquatic communities (Armitage 1984, pp. 141–143; Brusven 1984, p. 167; Vaughn and Taylor 1999, pp. 915–916; Watters 2000, p. 1). C.J. Strike Dam is the primary peak-loading hydroelectric facility in the Snake River, yet *Pyrgulopsis robusta* persists in the peak-loading-affected area (Clark 2005). For example, the largest monitored colony of *P. robusta* exists in the Snake River approximately 3 river miles (4.8 km) downstream of C.J. Strike Dam (Stephenson *et al.* 2004, p. 14). The Expert Panel and Service's Manager Panel both acknowledged that because colonies of *P. robusta* are widespread and known to occur over a 214-mile (344-km) stretch of the Snake River that is subject to long-term, recurring peak-loading and fluctuating flows, these colonies are resilient and will likely continue to persist into the foreseeable future.

The effects of dams and reservoirs have been suggested as barriers to dispersal for *Pyrgulopsis robusta*. Species that have limited distributions and/or smaller, isolated populations may have a higher risk of local extirpations due to various threats and demographic stochasticity (variability) (Meffe *et al.* 1997, pp. 284–299; Vaughn and Taylor 1999, p. 916; Fagan *et al.* 2002, p. 3250). Both the Expert Panelists and Service's Manager Panelists acknowledged this risk for springsnails, but did not expect these populations to become extirpated due to possible barriers to dispersal in the foreseeable future.

Groundwater Pumping

Groundwater pumping is only a concern for *Pyrgulopsis robusta* populations in southeast Oregon. Groundwater pumping for domestic use,

agriculture, and industry may deplete flows from groundwater-fed spring systems by altering, modifying, or curtailing habitats dependent on those groundwater sources (Sada and Vinyard 2002, pp. 277–278).

The Oregon Water Resources Department (OWRD) regulates water development (OWRD 2005a), but very little information is available for the Malheur Basin or the Abert Lake Basin, where the Harney Lake population of *Pyrgulopsis robusta* is found. While spring development and/or destruction have been implicated in native species declines in southeastern Oregon (Frest and Johannes 1995, p. 196), we are not aware of spring alterations, modifications, or conservation efforts that are affecting *P. robusta* in southeastern Oregon. Although at least one location previously containing *P. robusta* in southeastern Oregon no longer has springsnails (Hershler 1994, p. 41; Frest and Johannes 1995, p. 196), groundwater pumping can not be explicitly linked to the springsnail's absence. In two OWRD observation wells in the Malheur Basin, groundwater levels seem to have been relatively stable since 1960 (OWRD 2005b). We acknowledge that diversion of springwater flows and groundwater pumping can represent barriers to dispersal and potentially isolate populations of *P. robusta*. However, these effects are limited to populations only in southeast Oregon, and not elsewhere in the species' range.

Water Quality—Temperature, Nutrients, and Chemical Stressors

The 1992 listing rule (57 FR 59244) stated, “The quality of water in these habitats has a direct effect on the species survival. The species requires cold, well-oxygenated unpolluted water for survival. Any factor that leads to a deterioration in water quality would likely extirpate these taxa.”

Numerous reaches of the Snake and Columbia Rivers are classified as water-quality-impaired due to the presence of one or more pollutants (e.g., total phosphorous, sediments, total coliforms) in excess of State or Federal guidelines. Nutrient-enriched waters primarily enter the Snake and Columbia Rivers via springs, tributaries, fish farm effluents, municipal waste treatment facilities, and irrigation returns (U.S. Environmental Protection Agency (USEPA) 2002, pp. 4–20 to 4–22; USFWS 2004, p. 1; U.S. Geological Survey (USGS) 2005, p. 5). Irrigation water returned to rivers is generally warmer, contains pesticides or pesticide byproducts, has been enriched with nutrients from agriculture (e.g., nitrogen

and phosphorous), and frequently contains elevated sediment loads. Pollutants in fish farm effluent include nutrients derived from metabolic wastes of the fish and unconsumed fish food, disinfectants, bacteria, and residual quantities of drugs used to control disease outbreaks. Recent research found elevated levels of fine sediments and nitrogen as well as elevated levels of trace elements, including zinc, copper, cadmium, lead, and chromium, immediately downstream of aquaculture discharges (Falter and Hinson 2003, p. 53). Additionally, concentrations of lead, cadmium, and arsenic were detected in snails collected during a research study in the Snake River (Richards 2002). Researchers at the USGS (1998, p. 15) detected concentrations of some pesticides in fish tissues, streams, irrigation canals, and irrigation returns in the Snake River Basin in concentrations exceeding the aquatic-life criteria established by the USEPA. While some effects of pollutants, including metals and organic compounds in stream organisms, are documented in the literature (Naimo 1995, pp. 351–352; Clements 1999, pp. 1076–1078; Courtney and Clements 2002, pp. 1770–1773), the potential impact of these contaminants on *Pyrgulopsis robusta* has not been studied and is unknown. However, *P. robusta* has been documented to occur downstream in these stretches of the Snake River where municipal, aquaculture, and agricultural discharges occur.

In the upper Snake River Basin in Wyoming, very low levels of ammonia, nitrite and nitrate, phosphorus, trace metals, and pesticides have been detected in water quality assessments (USGS 2004, p. 39). Polecat Creek, which contains *Pyrgulopsis robusta* (Riley *et al.* 2003, p. 6), was included in Wyoming's section 303(d) of the Clean Water Act list of impaired waterbodies due to fecal coliform contamination (WDEQ 2004, pp. 1–91). However, water quality in the upper Snake River Basin in Wyoming is generally described as good (USGS 2004, p. 38).

Changes in a river's flow and depth as a result of dams lead to changes in sediment deposition dynamics and thermal characteristics (Poff *et al.* 1997, p. 773; Platts 1992, p. 2). Water-transported sediments that would be flushed downstream and deposited in pools, eddies, and other still water environments under normal river flows now settle in slow moving reservoir waters (Poff *et al.* 1997, p. 773; Simons 1979, pp. 96, 100–104). Additionally, drops in water velocity in reservoirs may result in elevated surface water

temperatures and reductions in dissolved oxygen (USGS 2005, p. 11). *Pyrgulopsis robusta* has adapted to, and survives in, a relatively wide range of temperatures within the Snake River (Lysne 2003, p. 27). The IPC has collected *P. robusta* in water temperatures ranging from near freezing to 80 degrees F (27 degrees C) (Clark 2005). While high temperatures may be of concern for some aquatic snail species, we are not aware that water temperature limits growth, reproduction, or survival of *P. robusta* in any portion of its range. *Pyrgulopsis robusta* is widespread and abundant, occurring in a variety of water quality, flow, and temperature ranges. Expert and Manager Panels noted that water quality has not significantly modified or curtailed the habitat or range of *P. robusta* to an extent that threatens the continued existence of the species.

Grazing

Grazing by cattle has been suggested to be a threat to *Pyrgulopsis robusta* habitat in southeastern Oregon (Frest and Johannes 1995, p. 196), but not in other areas. However, little information exists regarding the impact of livestock grazing on the *P. robusta* in southeastern Oregon. Since the mid 1980s, cattle have been excluded from riparian areas, springs, and spring creeks in both the Harney and Malheur Lakes region (Burnside 2004). The Expert and Manager panels agreed that grazing does not appear to constitute a threat to the continued existence of the species since it is limited only to portions of the southeastern Oregon populations.

Summary of Factor A

In summary, *Pyrgulopsis robusta* is distributed over a wide geographic area and a wide range of aquatic habitats in Idaho, Oregon, Washington, and Wyoming. Based on new information, previous concerns about the species being restricted to permanent free flowing water and a reduction in range limiting its distribution or threatening its existence are no longer valid. For example, since the 1992 listing, *P. robusta* in the Snake River has been collected at 174 locations over 214 river miles (342 km). We are not aware that water temperature limits growth, reproduction, or survival of *P. robusta* in any portion of its range. Dam-induced changes to large river habitats in the Snake River or Columbia River may create conditions that likely represent barriers to *P. robusta* migration; however, the species persists throughout long reaches of these two river systems in areas influenced by

dams and hydroelectric operations. Barriers to dispersal (*i.e.*, isolated and fragmented populations) were considered a threat factor by the Expert Panel for the southeastern Oregon populations, but were considered relatively insignificant in both the Snake and Columbia Rivers. The fact that *P. robusta* is often locally abundant, resilient, and adaptable to a range of extrinsic factors, contributes to the determination that *P. robusta* is not in danger of extinction within the foreseeable future. Thus, based on the best scientific and commercial data, we conclude that the present or threatened destruction, modification, or curtailment of *P. robusta*'s habitat or range is not a factor that threatens or endangers the species throughout all or a significant portion of its range.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Overutilization of *Pyrgulopsis robusta* for commercial, recreational, or scientific purposes was not considered to be an applicable threat at the time of the 1992 listing (57 FR 59242), and is still not considered by the Expert Panel and Service's Manager Panel to be a threat to *P. robusta* throughout all or a significant portion of its range.

C. Disease or Predation

We have no information on the actual effects of disease or parasites on *Pyrgulopsis robusta*.

At the time of the 1992 listing, fish predation was not considered to be a major threat (57 FR 59242). There is currently no information regarding the threat of predation on the continued existence of *Pyrgulopsis robusta*. Predation on snails, in general, is documented and is a natural occurrence (Merrick *et al.* 1992, p. 231; McCarthy and Fisher 2000, p. 387), but information on the effects of predation on *P. robusta* is limited. In the only known account of predation by fish on *P. robusta*, Beetle (1957, p. 17) reported shells were found in the digestive tract of a Roseyside sucker (*Catostomus fecundus*) near Jackson Lake Dam, Wyoming. A recent study of predation ecology with *Pyrgulopsis* species failed to observe predation by native crayfish (*Pacifastacus* spp.) (Lysne and Koetsier 2001, p. 6).

The Expert Panel did not identify disease or predation as a significant threat, but information is lacking to draw any definitive conclusions about risks to *Pyrgulopsis robusta* due to predation. Based on the best scientific and commercial data available, we conclude that disease and predation are

not factors that endanger or threaten *P. robusta* throughout all or a significant portion of its range.

D. The Inadequacy of Existing Regulatory Mechanisms

In the 1992 Idaho springsnail listing rule (57 FR 59244), nutrient loading and pollution in the middle Snake River were identified as areas of concern. We stated that it was unlikely that the downward trend in water quality would be reversed any time soon, because it would take several years before any recommendations to improve water quality, as outlined in comprehensive resource management plans for the Snake River, were fully implemented through local, State, and Federal programs and efforts. However, since the 1992 listing rule, some water quality improvements have been realized in localized reaches of the Snake River, primarily with regard to sediment and phosphorus reduction (Buhidar 2005). These improvements are more fully discussed in the Water Quality Management section below.

Based on our status review, we describe various regulatory mechanisms implemented by State and Federal resource agencies to protect *Pyrgulopsis robusta* and its habitat. Federal agency regulations are generally consistent across States, but State regulations may differ considerably with regard to similar natural resource issues. Analogous State natural resource agencies exist in Idaho, Oregon, Washington, and Wyoming.

Wildlife Conservation Statutes and Plans

Washington has the comprehensive statutory authority and mandate to “preserve and protect” all wildlife, including invertebrates such as *Pyrgulopsis robusta*, within its borders (Revised Code of Washington 77.04.012). The Idaho Department of Fish and Game (IDFG) developed a Comprehensive Wildlife Conservation Strategy (Idaho Strategy) that lists *P. robusta* as a “species of greatest conservation need” (IDFG 2005, p. 413). For example, *Pyrgulopsis robusta* conservation will be considered when IDFG engages other States, Federal agencies, and other conservation partners on proposed activities affecting Snake River habitats (e.g., boat ramp construction). The Idaho Natural Heritage Program lists Idaho springsnail as a species of concern, the Oregon Natural Heritage Program lists Columbia and Harney Lake springsnails as species of concern (ODFW 2005, p. 354), and in Wyoming, the Jackson Lake springsnail is also listed as a species of concern

(WGFD 2005, p. 15). These State wildlife conservation strategies and plans are useful to land managers because they provide the best available information for species of greatest conservation need and allow these managers to make informed decisions about land use changes.

Water Quality Management

There are various State-managed water quality programs within the range of *Pyrgulopsis robusta* in Idaho, Washington, Wyoming, and Oregon. These programs are tiered off of the Clean Water Act (CWA), which requires States to establish water quality standards that provide for the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water (“fishable/swimmable”). In addition, as part of the CWA, States must also include an antidegradation policy that protects waterbody uses, and high-quality waters. In Idaho, Washington, Wyoming, and Oregon, point source discharges are regulated through the National Pollutant Discharge Elimination System (NPDES) program. These NPDES permits are written to meet all applicable water quality standards established for a waterbody to protect human health and aquatic life.

Idaho has established water quality standards (e.g., water temperature and dissolved oxygen) for the protections of cold-water biota (e.g., invertebrate species) in many reaches of the Snake River. Although conditions within the river periodically exceed these limits during the summer months (USGS 2005, pp. 7–12), *Pyrgulopsis robusta* has been collected in water temperatures ranging from near freezing to 80 degrees F (27 degrees C) (Clark 2005). While high temperatures may be of concern for some aquatic snail species, water temperature does not seem to limit growth, reproduction, or survival of *P. robusta* in any portion of its range.

Waters that do not meet standards due to point- and non-point source pollution are listed on USEPA’s 303(d) list of impaired water bodies. States must submit to USEPA a 303(d) list (water quality-limited waters) and a 305(b) report (status of the State’s waters) every two years. Water quality improvements with regard to point and non-point sources have been realized in localized reaches of the Snake River where *P. robusta* occurs (Buhidar 2005), primarily with regard to sediment and phosphorus criteria. The IDEQ, under authority of the State Nutrient Management Act, is coordinating efforts to identify and quantify contributing sources of pollutants (including nutrient

and sediment loading) to the Snake River basin via the Total Maximum Daily Load (TMDL) approach. TMDLs are developed, adopted, and implemented within State Agricultural Water Quality Program, CWA section 401 Certification, BLM Resource Management Plans, the State Water Plan, and local ordinances.

In Oregon, point- and non-point source pollution is managed by Oregon’s Department of Environmental Quality (ODEQ). TMDLs for several stream reaches are in development for the Malheur River Basin where *Pyrgulopsis robusta* exists. TMDLs establish mechanisms to address point and non-point sources to bring these reaches into compliance with water quality standards.

In Washington, the State’s Department of Ecology (WECY) has a mandate to manage point and non-point sources of pollution entering Washington’s waters (WECY 2005). Non-point sources of pollution are regulated by numerous State of Washington statutes (WECY 2005), and managed primarily through Washington’s Water Quality Management Plan to Control Non-point Source Pollution (Plan), published in 2000. *Pyrgulopsis robusta* is found in the Columbia River, and the Plan may indirectly benefit the springsnails that occur there.

In Wyoming, *Pyrgulopsis robusta* exists within waters that occur in National Parks and are designated as Class 1 or “outstanding waters” by the Wyoming Department of Environmental Quality. Maintaining this designation is one of the National Park Service’s highest priorities (USGS 2004, p. 2). We are not aware of any proposals to modify these designations or of activities that would impair these water bodies.

Federal Land Management

Many large scale Federal management plans (e.g., U.S. Forest Service Land and Resource Management Plans, U.S. Bureau of Land Management (BLM) Resource Management Plans, National Wildlife Refuge Comprehensive Conservation Plans, and Interior Columbia Basin Ecosystem Management Plan) promote conservation of aquatic and terrestrial habitats, including those on which *Pyrgulopsis robusta* depends.

Much of the Federal lands adjacent to the Snake River in Wyoming, Idaho, Oregon, and Washington are managed by the BLM. Resource Management Plans (RMPs) that guide BLM resource management include provisions to protect water quality and riparian habitats. The Service and the BLM in Idaho have finalized a Conservation

Agreement (USBLM 2006, pp. 1–11) that commits the BLM to carry out specific actions to assess status and distribution of *P. robusta* in areas affected by management actions and also to modify those actions to avoid and minimize impacts to the species in the Snake River. In addition, BLM has completed Endangered Species Act section 7 consultations for some actions that may affect *P. idahoensis*, now known as *P. robusta*. The BLM's Boise and Twin Falls Districts have completed a joint section 7 consultation for ongoing livestock grazing activities in allotments adjacent to *P. robusta* habitats in the Snake River. Under that consultation, the BLM and grazing permittees have implemented actions to reduce the amount of shoreline grazing and grazing-related sediment, thereby reducing the risk of take of *P. robusta* resulting from livestock management.

Water Rights and Operations

In Idaho, there have been improvements in Snake River water management since the time of listing the Idaho springsnail in 1992 (57 FR 59244). Portions of the Snake River are temporarily protected from further allocation of consumptive use water rights (Barker *et al.* 2005) by order of the Director of the Idaho Department of Water Resources, although this does not preclude future water diversion or consumption projects within the range of *Pyrgulopsis robusta* in the Snake River of Idaho. For the other geographic areas where *P. robusta* occurs, we are not aware of any State-sponsored programs restricting allocation of consumptive use water rights.

The U.S. Bureau of Reclamation (BOR) operates numerous water projects in the Snake River basin and is involved in a variety of fish and wildlife conservation efforts through a number of different programs in Oregon, Washington, and Idaho (USBOR 2005). The BOR has conducted numerous surveys for sensitive mollusks for several years (USBOR 2002, p. 2; 2003, p. 2; 2004, p. 2). *Pyrgulopsis robusta* has not been found in the upper reaches of the Snake River. The BOR has developed 10-year Resource Management Plans designed to create a balance of resource development, recreation, and protection of natural and cultural resources for the lands and waters they manage. These plans outline resource management policies and actions that will be implemented to protect natural resources (*e.g.*, sensitive mollusk species) over each plan's 10-year life (USBOR 2005).

The U.S. Army Corps of Engineers (USACE) operates several hydroelectric

projects on the Columbia River within the known range of *Pyrgulopsis robusta*, including John Day, Dalles, and Bonneville Dams. Since passage of the National Environmental Policy Act of 1969, environmental protection has been an important mission for the Northwestern Division of the Corps (USACE 2005). Since legislation passed in 1990 establishing environmental protection as one of the primary missions of water resource projects, the Corps has taken steps to ensure that projects meet Federal, State, and local environmental requirements (USACE 2005).

A Settlement Agreement between the IPC and Service concerning the relicensing of IPC's mid-Snake and C.J. Strike hydroelectric projects (IPC and USFWS 2004) requires IPC to implement studies to assess effects on two listed Snake River aquatic snails, including *Pyrgulopsis robusta*, from operation of hydroelectric dams. The 1992 listing rule stated that proposals for numerous small hydroelectric projects to be developed on remaining free-flowing portions of the middle Snake River within the species' range, threatened the Idaho springsnail. However, those proposals have subsequently been withdrawn or were not approved by the Federal Energy Regulatory Commission (FERC) (Barker *et al.* 2005), reducing the likelihood of new FERC licensed hydroelectric projects impacting *P. robusta*.

Summary of Factor D

A wide variety of regulatory mechanisms managed by State and Federal resource agencies are in place to manage and protect *Pyrgulopsis robusta* and the habitats upon which it depends. Federal land management plans address conservation of *P. robusta* habitats, and Federal and State agencies are managing water projects to minimize impacts on *P. robusta* and protect the water quality where the species occurs. Water withdrawals for the allocation of consumptive water use in the Snake River basin have been halted through a temporary moratorium by the State of Idaho. Additionally, IPC hydroelectric projects on the Snake River in Idaho have begun to address *P. robusta* management needs via specific commitments in recent Settlement Agreements. Given that *P. robusta* occurs as multiple populations distributed over a wide geographic area, and a wide range and variety of habitat types, the variety of State and Federal regulatory mechanisms that directly and indirectly provide conservation benefits for *P. robusta* are generally considered adequate.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Numerous non-native and invasive species have become established throughout the range of *Pyrgulopsis robusta*, and others threaten to become established; however, their impacts on native species and ecosystems have not been well studied or understood. (Frest and Johannes 2000, p. 1; Anderson 2004, pp. 15–18; Sytsma *et al.* 2004, pp. 33–34).

In the 1992 listing rule (57 FR 59244) for the Idaho springsnail, we stated that the New Zealand mudsnail (*Potamopyrgus antipodarum*) was a potential threat to the Idaho springsnail. The New Zealand mudsnail was discovered in North America in 1987 in the Snake River, and has spread rapidly (Bowler 1991, p. 175; Richards and Lester 2003, p. 1; Richards *et al.* 2004, p. 114). The New Zealand mudsnail appears to flourish in warm waterbodies in Wyoming and Montana on substrates of silt to cobbles (Hall *et al.* 2003, p. 407; Cada 2004, p. 29), but is also reported to reach high densities within the much cooler waters of the Snake River (Clark *et al.* 2005, p. 17). The wide physical and physiological tolerances of the New Zealand mudsnail allow it to thrive in various habitats (Richards *et al.* 2001, pp. 375, 378; Hall *et al.* 2003, p. 408). The ability of the New Zealand mudsnail to occupy numerous habitat types, including those typically occupied by native snails (Richards *et al.* 2001, pp. 375, 378; Richards 2004, pp. 137–139), does not always provide a competitive advantage for the New Zealand mudsnail in interactions with native species (Cowie 2004).

In the Greater Yellowstone Ecosystem, researchers found evidence that New Zealand mudsnails limit the colonization of, and may influence the large-scale distribution of, other macroinvertebrates (Kerans *et al.* 2005, p. 135). Research in Wyoming has demonstrated that New Zealand mudsnails have reduced densities of *Pyrgulopsis robusta* in Polecat Creek in Yellowstone National Park, but *P. robusta* and New Zealand mudsnails continue to co-exist (Riley *et al.* 2003, pp. 16–18; Gustafson 2005, pp. 7–8). The threat the New Zealand mudsnail poses to *P. robusta* remains uncertain. However, the New Zealand mudsnail does not appear to currently endanger or threaten *P. robusta* throughout all or a significant portion of its range.

The Expert Panel and Service's Manager Panel identified the threat of non-native species, including the New Zealand mudsnail, to *Pyrgulopsis robusta*'s survival as low. Both panels

identified the lack of information about non-native species interactions with *P. robusta* as an area of uncertainty. However, direct cause and effect information that non-native species are endangering or threatening *P. robusta* populations does not exist.

Thus, based on the best scientific and commercial data available, we have concluded that other natural and manmade factors do not endanger or threaten *Pyrgulopsis robusta* throughout all or a significant portion of its range.

Summary of Threats Section

Evidence collected since the Idaho springsnail was listed in 1992 as endangered (57 FR 59244) indicates *Pyrgulopsis idahoensis* no longer constitutes a distinct species. The revised species, *Pyrgulopsis robusta*, is a combined taxon composed of four previously regarded as taxonomically distinct springsnails—the Idaho, Jackson Lake, Harney Lake, and Columbia River springsnails.

Pyrgulopsis robusta populations in the Columbia and Snake Rivers have relatively high abundance and occur as multiple populations distributed over a wide geographic area. The Columbia River population of *P. robusta* is currently known from 17 locations starting from river mile 20 (rkm 32) and continuing for nearly 400 river miles (644 rkm) upstream to just below Priest Rapids Dam. In the Snake River, *P. robusta* is more widely distributed than originally cited in the 1992 listing rule and has been documented at over 174 known locations, over 214 river miles (344 km). The species occurs in a range of habitat types, and is resilient to changes in flow and water quality. Extant populations occur in various habitats, including springs, and river reaches characterized by a wide range of flow conditions, and both occur in lake and reservoir locations. *Pyrgulopsis robusta* has adapted to, and survives in, a relatively wide range of temperatures. Fluctuating water temperatures likely do not limit growth, reproduction, or survival of *P. robusta* in any portion of its range. Adequate existing regulatory mechanisms contributing to *P. robusta* conservation include water quality regulations and FERC hydropower Settlement Agreements. At this time *P. robusta* exists in multiple populations in the States of Oregon, Washington, Idaho, and Wyoming and is expected to persist into the future. We evaluated the best available scientific and commercial data regarding status of and threats to the newly described *P. robusta*, and determined that the species is not in danger of extinction, nor is it likely to become endangered in the foreseeable

future throughout all or a significant portion of its range, and therefore does not meet the definition of threatened or endangered.

Finding

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species. We reviewed the petitions, available published and unpublished scientific and commercial information, and information submitted to us during the public comment period following our 90-day petition findings. This finding reflects and incorporates information we received during the public comment period and responds to significant issues (i.e., incorporates appropriate information raised in comments regarding *P. robusta* taxonomy, life history, distribution, status, and threats). We also consulted with recognized springsnail experts and Federal and State resource agencies. Based on this review, we find that (1) Based on a change in taxonomic status, the Idaho springsnail is no longer considered a listable entity, and therefore its delisting is warranted; (2) based on a change in taxonomic status, the Jackson Lake, Harney Lake, and Columbia springsnails are no longer considered listable entities, and therefore their listing is not warranted; and (3) listing of the combined taxon, *P. robusta*, is not warranted because *P. robusta* is distributed over a wide geographic area and range of aquatic habitats, is often locally abundant, and appears to be resilient and adaptable to a range of factors affecting it, including varying water temperatures, flow conditions, and water chemistry, and is therefore not threatened with endangerment throughout all or a significant portion of its range.

In making this determination, we have followed the procedures set forth in section 4(a)(1) of the Act and regulations implementing the listing provisions of the Act (50 CFR part 424). While the finding reflects the analyses conducted to fulfill our responsibilities under sections 4(b)(3)(A) (status review) and 4(c)(2) (5-year review) of the Act, we request that you submit any new information, whenever it becomes available, for this species concerning status and threats. We intend that any action for the *P. robusta* be as accurate as possible. Therefore, we will continue to accept additional information and comments from all concerned governmental agencies, the scientific community, Native American Tribes, industry, or any other interested party concerning this finding.

Delisting Proposal

Section 4(a)(1) of the Act and regulations (50 CFR part 424) issued to implement the listing provisions of the Act set forth the procedures for adding species to, or removing them from, Federal lists. The regulations at 50 CFR 424.11(d) state that a species may be delisted if: (1) The species is extinct or has been extirpated from its previous range; (2) the species has recovered and is no longer endangered or threatened; or (3) investigations show that the best scientific or commercial data available when the species was listed, or the interpretation of such data, were in error. Since the time of the Idaho springsnail listing, additional study has shown that *Pyrgulopsis idahoensis* is not a distinct species, but is now part of a combined taxon (*Pyrgulopsis robusta*) composed of springsnails occurring in the States of Wyoming, Oregon, Idaho, and Washington. Our evaluation of *P. robusta* status and threats indicates it does not qualify for protection under the Act. After a review of the best available scientific and commercial data, we are proposing to remove *Pyrgulopsis idahoensis* from the List of Endangered and Threatened Wildlife in 50 CFR 17.11.

Effects of the Proposed Rule

This action proposes to remove *Pyrgulopsis idahoensis* from the List of Endangered and Threatened Wildlife. If this proposed rule is finalized, the prohibitions and conservation measures provided by the Act would no longer apply to *P. robusta*, with which *P. idahoensis* has been combined. Interstate commerce, import, and export of this species would not be prohibited under the Act. In addition, Federal agencies would no longer be required to consult under section 7 of the Act on actions which may affect this species. There is no designated critical habitat for this species, and therefore the proposed rule has no effect on critical habitat.

Public Hearing

The Act provides for one or more public hearings on this proposal, if requested. Requests must be filed by the date specified in the **DATES** section. Such requests must be made in writing and addressed to the Field Supervisor, Snake River Fish and Wildlife Office, 1387 S. Vinnell Way, Room 368, Boise, ID 83709.

Peer Review

In accordance with our peer review policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek expert opinions of at least three

appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure that our delisting proposal is based on scientifically sound data, assumptions, and analyses. We will send copies of this proposed rule to these peer reviewers immediately following publication in the **Federal Register**. We will consider all peer review comments received during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposed rule.

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of the sections, use of headings, paragraphing, and so forth) aid or reduce its clarity? (4) Is the description of the notice in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the proposed rule? (5) What else could we do to make this proposed rule easier to understand?

Send a copy of any comments on how we could make this proposed rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240. You may e-mail your comments to this address: Exsec@ios.doi.gov.

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

Office of Management and Budget (OMB) regulations at 5 CFR 1320 implement provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), which requires that interested members

of the public and affected agencies have an opportunity to comment on agency information collection and recordkeeping activities (5 CFR 1320.8(d)). The OMB regulations at 5 CFR 1320.3(c) define a “collection of information” as the obtaining of information by or for an agency by means of identical questions posed to, or identical reporting, recordkeeping, or disclosure requirements imposed on, 10 or more persons. Furthermore, 5 CFR 1320.3(c)(4) specifies that “10 or more persons” refers to the persons to whom a collection of information is addressed by the agency within any 12-month period. This proposal does not contain any new collections of information that require OMB approval under the Paperwork Reduction Act.

National Environmental Policy Act

The Service has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with actions adopted under section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)).

Government-to-Government Relationship With Tribes

In accordance with the President’s memorandum of April 29, 1994, “Government-to-Government Relations With Native American Tribal Governments” (59 FR 22951), Executive Order 13175, and the Department of the Interior’s manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. Therefore, we will solicit information

from Native American Tribes during the comment period to determine potential effects on them or their resources that may result from the delisting of the Idaho springsnail, and we will fully consider their comments on the proposed rule submitted during the public comment period.

References

A complete list of all references cited is available on request from the Snake River Fish and Wildlife Office (see **ADDRESSES**).

Author

The authors of this document are staff of the U.S. Fish and Wildlife Service, Snake River Fish and Wildlife Office, Boise, Idaho.

List of Subjects in 50 CFR Part 17

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

Proposed Regulation Promulgation

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

PART 17—[AMENDED]

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

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

§ 17.11 [Amended]

2. Amend § 17.11(h) by removing the entry “Springsnail, Idaho (*Fontelicella idahoensis*)” under SNAILS from the List of Endangered and Threatened Wildlife.

Dated: September 20, 2006.

Marshall Jones,

Acting Director, Fish and Wildlife Service.

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