Although this action does not require any special considerations under Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 7629, February 16, 1994), EPA seeks to achieve environmental justice, the fair treatment and meaningful involvement of any group, including minority and/or low-income populations, in the development, implementation, and enforcement of environmental laws, regulations, and policies. As such, to the extent that information is publicly available or was submitted in comments to EPA, the Agency considered whether groups or segments of the population, as a result of their location, cultural practices, or other factors, may have atypical or disproportionately high and adverse human health impacts or environmental effects from exposure to the pesticide discussed in this document, compared to the general population.

XI. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of this rule in the **Federal Register**. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: August 13, 2010.

Daniel J. Rosenblatt,

Acting Director, Registration Division, Office of Pesticide Programs.

■ Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In §180.960, in the table, add alphabetically the following polymer to read as follows:

§ 180.960 Polymers; exemptions from the requirement of a tolerance.

* * * * *

Polymer	CAS No.
* * *	* *
Acetic acid ethenyl ester, polymer with oxirane, minimum number average molecular weight (in amu), 17,000.	25820–49–9
* * *	* *

[FR Doc. 2010–21138 Filed 8–24–10; 8:45 am]

BILLING CODE 6560–50–S

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R1–ES–2008–0084; [92220–1113–0000–C6]

RIN 1018–AW16

Endangered and Threatened Wildlife and Plants; Removal of the Utah (Desert) Valvata Snail From the Federal List of Endangered and Threatened Wildlife

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: Under the authority of the Endangered Species Act of 1973, as amended (Act), we, the U.S. Fish and Wildlife Service (Service), are removing the Utah (desert) valvata snail (*Valvata utahensis*) from the Federal List of Endangered and Threatened Wildlife (List). Based on a thorough review of the best available scientific and commercial data, we determined that the Utah valvata snail is more widespread and occurs in a greater variety of habitats in the Snake River than known at the time of listing in 1992. We now know the Utah valvata snail is not limited to areas of cold-water springs or spring outflows; rather, it persists in a variety of aquatic habitats, including cold-water springs, spring creeks and tributaries, the mainstem Snake River and associated tributary stream habitats, and reservoirs influenced by dam operations. Given our current understanding of the species' habitat requirements and threats, the species does not meet the definition of an endangered or threatened species under the Act. Therefore, we are removing the Utah valvata snail from the List, thereby removing all protections provided by the Act.

DATES: This effective date of this rule is September 24, 2010.

ADDRESSES: This final rule is available on the Internet at *http://www.regulations.gov* and at *http://www.fws.gov/idaho.* Comments and materials received, including supporting documentation used in preparing this rule, will be available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Idaho Fish and Wildlife Office, 1387 S. Vinnell Way, Room 368, Boise, ID 83709; by telephone.

FOR FURTHER INFORMATION CONTACT: Brian Kelly, State Supervisor, at the above address; by telephone 208–378–5243; or by fax at 208–378–5262 e-mail at: *fw1srbocomment@fws.gov.* Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

The Utah valvata snail (*Valvata utahensis*) was first recognized as a species in 1902, based on specimens collected from Utah Lake and Bear Lake, Utah (Walker 1902, p. 125). Its common name has since been changed by the American Fisheries Society to the "desert valvata" in the benchmark text for aquatic invertebrate nomenclature, *Common and Scientific Names of Aquatic Invertebrates from the United States and Canada* (Turgeon *et al.* 1998, p. 109), presumably due to the fact that it is no longer known to occur in Utah. However, because the species is currently listed in the Code of Federal Regulations as the Utah valvata snail, *Valvata utahensis* will be referred to as the Utah valvata snail throughout this final rule.

Range

The Utah valvata snail, or at least its closely related ancestors, has been described as ranging widely across the western United States and Canada as far back as the Jurassic Period, 199.6 ± 0.6 to 145.5 ± 4 million years ago (Taylor 1985a, p. 268). Fossils of the Utah valvata snail are known from Utah to California (Taylor 1985a, pp. 286–287). The Utah valvata snail was likely present in the ancestral Snake River as it flowed south from Idaho, through Nevada, and into northeastern California (Taylor 1985a, p. 303). The Snake River's course changed to join the Columbia River Basin approximately 2 million years ago (Hershler and Liu 2004, pp. 927–928).

At the time of listing in 1992 (57 FR 59244, December 14, 1992), we reported the range of the Utah valvata snail as being limited to a few springs and mainstem Snake River sites in the Hagerman Valley, Idaho (River Mile (RM) 585), a few sites above and below Minidoka Dam (RM 675), and immediately downstream of American Falls Dam (RM 709).

New data collected since the time of listing indicate that the Utah valvata snail is discontinuously distributed in at least 255 miles (410 kilometers (km)) of the Snake River and some associated tributary streams, an increase of nearly 122 river miles (196 km) from the known range at the time of listing. Their current range in the Snake River extends from RM 585 near the Thousand Springs Preserve (Bean *in litt.* 2005), upstream to the confluence of the Henry's Fork with the Snake River (RM 837; Fields 2005, p. 11). Colonies of the Utah valvata snail have been found in the Snake River near the towns of Firth (RM 777.5), Shelley (RM 784.6), Payne (RM 802.6), and Roberts (RM 815), and in the Henry's Fork approximately 9.3 miles (15 km) upstream from its confluence with the Snake River (at Snake RM 832.3) (Gustafson *in litt.* 2003). Based on limited mollusk surveys, the species has not been found upstream from the described location on the Henry's Fork or in the South Fork of the Snake River. Tributary streams to the Snake River where Utah valvata snails have been collected include Box Canyon Creek (RM 588) (Taylor 1985b, pp. 9–10), and one location in the Big Wood River (Wood River Mile (WRM) 35) (USBR 2003, p. 22).

Habitat Use

At the time of listing in 1992, the best available data indicated that Utah valvata snails "characteristically require cold, fast water, or lotic habitats * * * in deep pools adjacent to rapids or in perennial flowing waters associated with large spring complexes" (57 FR 59244, December 14, 1992). In numerous field studies conducted since then, the species has been collected at a wide range of water depths, ranging from less than 3.2 feet (1 meter) (Stephenson and Bean 2003, pp. 98–99) to depths greater than 45 feet (14 meters) (USBR 2003, p. 20), and at temperatures between 37.4 and 75.2 degrees Fahrenheit (F) (4 to 24 degrees Celsius (C)) (Lysne *in litt.* 2007; Gregg *in litt.* 2006).

Work conducted by the Idaho Department of Fish and Game (IDFG) in the upper Snake River demonstrated that Utah valvata snail presence was positively correlated with water depth (up to 18.37 feet (5.6 meters)) and temperature (up to 63 degrees F (17.2 degrees C)) (Fields 2005, pp. 8–9), and Utah valvata snail density was positively correlated with macrophyte (a water plant large enough to be observed with the unaided eye) coverage, water depth, and temperature (Fields 2006, p. 6). Similarly, Hinson (2006, pp. 28–29) analyzed available data from several studies conducted by the U.S. Bureau of Reclamation (USBR) (2001–2004), Idaho Power Company (IPC) (1995–2002), IDFG, Idaho Transportation Department (2003–2004) and others, and demonstrated a positive relationship between Utah valvata snail presence and macrophytes, water depth, and fine substrates. One study reported Utah valvata snails in organically enriched fine sediments with a heavy macrophyte community, downstream of an aquaculture facility (RM 588) (Hinson 2006, pp. 31–32).

Survey data and information reported since the time of listing demonstrate that the Utah valvata snail is able to live in reservoirs, which were previously thought to be unsuitable for the species (Frest and Johannes 1992, pp. 13–14; USBR 2002, pp. 8–9; Fields 2005, p. 16; Hinson 2006, pp. 23–33). We now know the Utah valvata snail persists in a variety of aquatic habitats, including cold-water springs, spring creeks and tributaries, the mainstem Snake River and associated tributary stream habitats, and reservoirs.

Alterations of the Snake River, including the construction of dams and reservoir habitats, have changed fluvial processes resulting in the reduced likelihood of naturally high river flows or rapid changes in flows, and the retention of fine sediments (U.S. Environmental Protection Agency (USEPA) 2002, pp. 4.30–4.31), which may also increase potential habitat for the species (*e.g.,* Lake Walcott and American Falls Reservoirs; however, *see* Summary of Factors Affecting the Species below for a discussion of the effects of rapidly drawing down reservoirs). Utah valvata snail surveys conducted downstream from American Falls Dam (RM 714.1) to Minidoka Dam (RM 674.5), from 1997 and 2001–2007, consistently found Utah valvata snails on fine sediments within this 39-mile (62.9 km) river/reservoir reach of the Snake River (USBR 1997, p. 4; USBR 2003, p. 8; USBR 2004, p. 5; USBR 2005, p. 6; USBR 2007, pp. 9–11; USFWS 2005, p. 119). Surveys conducted downstream of Minidoka Dam (RM 674.5) to Lower Salmon Falls Dam (RM 573.0) have also documented Utah valvata snails in that reach, including one record from the tailrace area of Minidoka Dam (the downstream part of a dam where the impounded water reenters the river) in 2001 (USFWS 2005, p. 120).

In summary, based on available data, the Utah valvata snail is not as specialized in its habitat needs as we thought at the time of listing. In the Snake River, the species inhabits a diversity of aquatic habitats throughout its 255-mile (410 km) range, including cold-water springs, spring creeks and tributaries, mainstem and free-flowing waters, reservoirs, and impounded reaches. The species occurs on a variety of substrate types including both fine sediments and more coarse substrates in areas both with and without macrophytes. It has been collected at water depths ranging from less than 3.2 feet (1 meter) to greater than 45 feet (14 meters), and at water temperatures ranging from 37.4 to 75.2 degrees F (3 to 24 degrees C).

Population Density

Like many short-lived and highly fecund invertebrates, the density of Utah valvata snails at occupied sites can vary greatly. For example, at one cold-water spring site at the Thousand Springs Preserve, Utah valvata snail density in 2003 ranged between 0 and 1,724 snails per square meter (/m^2), with an average of 197 snails/m^2 (Stephenson *et al.* 2004, p. 23). In the mainstem Snake River between American Falls Reservoir and Minidoka Dam in 2002, Utah valvata snail densities averaged 91 snails/m^2 (ranging from 0 to 1,188 snails/m^2), and in American Falls Reservoir densities averaged 50 snails/m^2 (range unavailable) (USBR 2003, p. 20). In 2008 and 2009, monitoring efforts were carried out at sites first monitored by the USBR in the late 1990s and early 2000s below American Falls Reservoir, which is a free-flowing riverine environment (Gates *in litt.* 2009). Monitoring results indicate these specific colonies have decreased in density and proportional occurrence compared to results from the late 1990s and early 2000s, with the greatest densities found in 2009 ranging from 4 to 24 snails/m^2 and presence ranging from 5 to 9 percent (Gates *in litt.* 2009). However, 2009 monitoring sites do not represent a comprehensive survey of the area below American Falls Reservoir as only two of the four largest colonies sampled in 2008 were sampled in 2009 (Gates *in litt.* 2009). Above American Falls Reservoir in the mainstem Snake River, Utah valvata snail densities sampled in 2004 at six sites averaged 117 snails/m^2 (ranging from 0 to 1,716 snails/m^2) (Fields 2006, pp. 12–13).

Within occupied reservoirs, the proportional occurrence of snails is relatively high. For all field studies and surveys, lower Lake Walcott Reservoir had the highest proportional occurrence (USBR 2002, p. 5; USBR 2003, p. 6). For sample years 2001 to 2006, the relative proportion of samples containing Utah valvata snails ranged from 40 (in 2004) to 62 (in 2002) percent of samples collected. Similarly, American Falls reservoir samples contained a high proportion of Utah valvata snails, with the species detected in 21 (in 2001) to 33 (in 2003) percent of samples. Such high proportional occurrence in reservoirs over multiple years is additional evidence that Utah valvata snails are using reservoir habitats and are not restricted to cold-water springs or their outflows.

Previous Federal Actions

We listed the Utah valvata snail as endangered on December 14, 1992 (57 FR 59244). Based on the best available data at that time we determined that the Utah valvata snail was threatened by proposed construction of new hydropower dams, the operation of existing hydropower dams, degraded water quality, water diversions, the introduced New Zealand mudsnail (*Potamopyrgus antipodarum*), and the lack of existing regulatory protections (57 FR 59244). In 1995, we completed the Snake River Aquatic Species Recovery Plan (Plan), which included the Utah valvata snail. We have not designated critical habitat for this species.

On April 11, 2006, we initiated a 5-year review of the species' status (71 FR 18345) in accordance with section 4(c)(2) of the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 *et seq.*). On December 26, 2006, the Service received a petition from the Governor of Idaho and attorneys from several irrigation districts and canal districts requesting that we remove the Utah valvata snail from the List. On June 6, 2007, the Service published a **Federal Register** notice announcing that the petition presented substantial scientific information indicating that removing the Utah valvata snail from the List may be warranted, and initiating a status review (72 FR 31264). As part of our best available scientific and commercial data analysis, we conducted a 30-day peer review on a draft status-review document, which was completed in September 2007 (USFWS *in litt.* 2007).

On July 16, 2009, we published a warranted 12-month finding on the delisting petition and a proposed rule to remove the Utah valvata snail from the Federal List of Endangered and Threatened Wildlife (74 FR 34539). We solicited data and comments from the public on the proposed rule. The comment period opened on July 16, 2009, and closed on September 14, 2009. A summary of the comments we received and our responses are provided below.

Summary of Comments and Responses

In accordance with our policy on peer review, published on July 1, 1994 (59 FR 34270), we solicited scientific peer review from four appropriate and independent experts following publication of the proposed rule. Reviewers were asked to review the proposed rule to help ensure our use of the best available scientific and commercial data, and to maximize the quality, objectivity, thoroughness, and utility of the information upon which the final rule is based. One of the peer reviewers submitted comments which we summarize and respond to below.

Peer Review Comments and Responses

(1) *Comment:* New monitoring data collected in the Vista/Neeley section of the Snake River below American Falls Reservoir (RM 713; a free flowing riverine environment) from 2008 and 2009 indicate lower Utah valvata snail densities than were observed during surveys in the late 1990s and early 2000s. These data, along with other preliminary sampling results provided, suggest that Utah valvata snail populations can experience large fluctuations in population size within and among years.

Our Response: We thank the peer reviewer for the additional monitoring data, which we have incorporated into this final rule.

While the Utah valvata snail population appears to have declined between 2002 and 2009 in the Vista/Neeley section (RM 713) of the Snake River, it should be noted that different collection methods and sample sizes used for data collection limit our ability to precisely quantify site-specific Utah valvata snail population declines. Also, the data reported are from a small portion (within 1.92 miles (3.2 km)) (USBR 2003, p. 4) of the 255-river-mile (410 km) range of the Utah valvata snail in the Snake River and tributary streams. Lastly, the 2009 monitoring sites do not represent a comprehensive survey of the reach below American Falls dam because they were based on only two of the four largest colonies that were sampled in 2008.

Compared to vertebrate species, most invertebrates have short generation times, small body size, and rapid rates of population increase and decline. For these reasons, invertebrate populations frequently undergo large fluctuations in size and may vary greatly between years due to environmental parameters and other factors affecting habitat (Ricklefs 1979, pp. 509–510; Murphy *et al.* 1990, p. 41).

In general, consistent, long-term monitoring of population abundance and persistence throughout the range of the Utah valvata snail is lacking. This limits our ability to calculate reliable estimates of population trends. In the case of Utah valvata snails, although there appears to be large interannual variation in population numbers at the few sites for which we have monitoring data, such as in the Vista/Neeley section of the Snake River, this is not necessarily an indication that the species' status has degraded or that the species is undergoing a long-term population decline.

(2) *Comment:* The peer reviewer stated that the greatest threat to the Utah valvata snail is from annual dewatering of the Snake River below the mainstem dams. Annual water drawdowns expose hundreds of meters of littoral zone habitat in the Vista/Neeley and Coldwater sections of the Snake River within a period of days.

Our Response: In making our delisting determination, we evaluated several threat factors, including the operation of existing hydropower dams. Within the Vista/Neeley section below American Falls reservoir, Utah valvata snails are able to re-colonize most submerged zones during summer high flows (USFWS 2005, p. 127). Although up to 54 percent of the Utah valvata population in the Neeley reach may be subject to desiccation from annual water withholdings upstream for storage, existing operations by the Bureau of Reclamation that provide minimum flows (350 cubic feet per second (cfs)) below American Falls Dam (USFWS 2005, p. 25) are likely to provide for a viable population there (USFWS 2005, pp. 127–128). While annual drawdowns are likely to negatively affect Utah valvata snail populations in certain years, the best available data indicate that these drawdowns are not likely to lead to significant, long-term population declines (USFWS 2005, pp. 127–128).

A complete review and evaluation of the threats affecting the Utah valvata snail, including a discussion of our rationale in assessing those threats, is presented in the Summary of Factors Affecting the Species section of this rule.

(3) *Comment:* The peer reviewer stated that 10 years of data indicate the continued coexistence of the Utah

valvata snail and New Zealand mudsnails in the Vista/Neeley section of the Snake River (RM 713), which implies that the New Zealand mudsnail is not considered a threat to the persistence of the Utah valvata snail. However, the peer reviewer recommends future population monitoring at these sites.

Our Response: The Service would like to thank the peer reviewer for the data and comments. A complete review and evaluation of the threat of the New Zealand mudsnail, including a discussion of our rationale in assessing those threats, is presented in the Summary of Factors Affecting the Species section of this rule.

Public Comments and Responses

During the 60-day comment period on the proposed rule, we received four public comments, in addition to the peer review comment. Public comments that provided new substantive information were incorporated into this final rule, and are addressed below.

(4) *Comment:* The State of Idaho's Office of Species Conservation, along with three canal companies and four irrigation districts, supports the proposal to delist the Utah valvata snail based on new information regarding its distribution and habitat requirements. There are several management plans and measures, not identified in the proposed rule, which will likely benefit the Utah valvata snail by increasing Snake River flows including: The Nez Perce Water Rights Agreement, the Bell Rapids Mutual Irrigation Company Water Rights Purchase, and recent aquifer management planning projects within the range of the Utah valvata snail. In addition, information was provided that the 2004 Idaho Power Company Integrated Resource Plan does not identify new hydropower projects within the range of the Utah valvata snail.

Our Response: We thank the State of Idaho and others for the additional information. We have incorporated the relevant information into the Summary of Factors Affecting the Species section below.

(5) *Comment:* Several commenters provided new data and information regarding the ecology and threat factors affecting the Utah valvata snail. One commenter said that competition between the Utah valvata snail and the nonnative, invasive New Zealand mudsnail may be a more significant threat than we described, and therefore we should further consider the effects of the New Zealand mudsnail and other invasive species on the Utah valvata snail before removing it from the Federal List of Endangered and Threatened Wildlife. In addition, this commenter stated that the effects of climate change represent a new threat to the Utah valvata snail and its habitat and should be addressed and analyzed in the final rule.

Our Response: We thank the commenters who provided new information and data for our consideration in making this final determination. We have evaluated the available scientific and commercial data regarding the Utah valvata contained in reports, biological assessments and opinions, published journal articles, and other documents.

Our knowledge and understanding of the habitat needs of the Utah valvata snail has changed substantially since the species was listed in 1992. Survey data collected since 1992 indicate that the geographic range of the species in the Snake River is approximately 122 river miles (196 km) larger than known at the time of listing, that it occurs in a variety of substrate types (*e.g.,* fines to cobble size) and flows, and that it tolerates a range of water-quality parameters.

Surveys have shown the New Zealand mudsnail frequently co-occurs with the Utah valvata snail and may compete for habitat or food. Although the New Zealand mudsnail has been reported at extremely high densities in the middle Snake River (Richards *et al.* 2001, p. 375), and at moderate-to-high densities at five sites in tributaries to the Snake River and the Snake River above American Falls Reservoir, there is no evidence that after 20 years of co-occurrence the New Zealand mudsnail has caused local extirpations of the Utah valvata snail.

Regarding climate change, there is compelling evidence that we are living in a time of rapid, worldwide climate change. For example, 11 of the 12 years from 1995–2006 rank among the 12 warmest years since 1850 (Independent Scientific Advisory Board (ISAB) 2007, p. iii). In the Pacific Northwest, regionally averaged temperatures have risen 1.5 degrees F (0.8 degrees C) over the last century, and are projected to increase by another 3 to 10 degrees F (1.5 to 5.5 degrees C) over the next 100 years (Mote *et al.* 2003, p. 54; Karl *et al.* 2009, p. 135). While the specific effects of global climate change on the Utah valvata snail are unclear, aquatic species and their habitats may be particularly vulnerable to changes in temperatures and precipitation patterns. Nevertheless, our current understanding of the Utah valvata snail is that it occurs in a variety of substrate types (*e.g.,* fines to cobble size), flows, and depths, and tolerates a range of water-quality parameters, including elevated water temperatures.

Our updated evaluation of the threat factors, including climate change, to the Utah valvata snail is presented in the Summary of Factors Affecting the Species section of this final rule.

(6) *Comment:* One commenter stated that populations believed to be Utah valvata snails may in fact be *Valvata humeralis,* and therefore recommended that we positively identify all Utah valvata snail populations, through genetic analysis, before removing them from the Federal List of Endangered and Threatened Wildlife.

Our Response: Studies and surveys have documented the *Valvata humeralis* snail often co-occurs with the Utah valvata snail. Although these two species possess many similar morphological characteristics, they can be distinguished through variations in shell morphology. The Utah valvata possesses a taller shell spire and more prominent carinae than the *Valvata humeralis* (Burch 1989, pp. 82–83; Walker 1902, pp. 121–125). Miller *et al.* (2006b, pp. 3–4) confirmed through genetic analysis that the Utah valvata snail and *Valvata humeralis* are distinct species and demonstrated that the species can be effectively distinguished using morphological characteristics (i.e., the morphological data aligned with the genetic data).

The Service, along with other agencies and researchers, use the difference in shell morphology as the primary method to differentiate between these two species. While we acknowledge, given morphological similarities, there is potential to confuse individuals of these two species where they co-occur (Miller *et al.* 2006b, p. 1), genetic data confirm Utah valvata snail occurrence at multiple sites within the geographic range described at the beginning of this document (Miller *et al.* 2006b, entire). Therefore, the Service believes that additional genetic testing of all Utah valvata snail populations for identification purposes is unnecessary.

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533) and implementing regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Federal List of Endangered and Threatened Wildlife (List).

Under section 4 of the Act, a species may be determined to be endangered or threatened on the basis of any of the following five factors: (A) Present or threatened destruction, modification, or curtailment of habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We must consider these same five factors in delisting a species. We may delist a species according to 50 CFR 424.11(d) if the best available scientific and commercial data indicate that the species is neither endangered nor threatened for the following reasons: (1) The species is extinct; (2) the species has recovered and is no longer endangered or threatened; or (3) the original scientific data used at the time the species was classified were in error.

A species is "endangered" for purposes of the Act if it is in danger of extinction throughout all or a significant portion of its range and is "threatened" if it is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Factor A. The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

Construction of New Hydropower Dams

In our 1992 final rule listing the Utah valvata snail as an endangered species, we stated: "Six proposed hydroelectric projects, including two high dam facilities, would alter free flowing river reaches within the existing range of [the Utah valvata snail]. Dam construction threatens the [Utah valvata snail] through direct habitat modification and moderates the Snake River's ability to assimilate point and non-point pollution. Further hydroelectric development along the Snake River would inundate existing mollusc habitats through impoundment, reduce critical shallow, littoral shoreline habitats in tailwater areas due to operating water fluctuations, elevate water temperatures, reduce dissolved oxygen levels in impounded sediments, and further fragment remaining mainstem populations or colonies of these snails" (57 FR 59251).

Since the time of listing, proposed hydroelectric projects discussed in the 1992 final rule are no longer moving forward. The A.J. Wiley project and Dike Hydro Partners preliminary permits have lapsed; the Kanaka Rapids, Empire Rapids, and Boulder Rapids permits were denied by the Federal Energy Regulatory Commission (FERC) in 1995; there was a notice of surrender of the preliminary permit for the River Side Project in 2002; and two other proposed projects, the Eagle Rock and Star Falls Hydroelectric Projects, were denied preliminary permits by the FERC. In 2003, a notice was provided of surrender of preliminary permit for the Auger Falls Project. Information provided by the State of Idaho indicates that all proposals and preliminary permits for the construction of new dams along the mid-Snake River have either lapsed or been denied by the FERC (Caswell *in litt.* 2006). In addition, the 2006 IPC Integrated Resource Plan does not identify any new, large hydropower projects within the Snake River (IPC 2006, p. 57). Lastly, recent studies have shown that the Utah valvata snail is not as limited in its geographic range or habitat needs as we had thought at the time of listing (see Background section above).

Operation of Existing Hydropower Dams

In the 1992 final rule, we 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 to the Utah valvata snail. We also stated, as was our understanding at the time, that the Utah valvata snail "cannot tolerate true impoundment or reservoir conditions" (57 FR 59248). Studies conducted since the time of listing have shown the Utah valvata snail is able to persist in reservoirs and in areas downstream of peak-loading dams, contrary to our understanding of the species at the time of listing (USFWS 2005, pp. 105, 127–128; 57 FR 59244, 59245). For example, Lake Walcott (RM 702.5 to 673.5; upstream of Minidoka Dam) appears to contain the largest population of Utah valvata snails in the Snake River system (USFWS 2005, pp. 111–112). This is likely due to relatively good water quality in the reservoir compared to downstream sections of the Snake River near Hagerman where water quality is influenced by agricultural, municipal, and aquaculture flows into the river. In lower Lake Walcott, there is a large area of suitable Utah valvata snail habitat that remains submerged despite annual drawdowns during the irrigation season (the reservoir fluctuates up to 5 feet (1.5 meters) annually, thereby limiting the number of snails affected by dewatering and desiccation). Further, surveys conducted in the mainstem Snake River in 1997, 1998, and 2001 from American Falls Dam (RM 714.1) to Lake Walcott (RM 702.5) indicate a fairly large and viable population of Utah valvata snails even though shoreline habitats in this stretch undergo annual dewatering (USFWS 2005, p. 119). In American Falls reservoir, dam operations and fluctuating flows have been estimated to kill between 5 and 40 percent of the Utah valvata snails through dewatering and desiccation of their habitat in most years. Nevertheless, Utah valvata snails continue to persist in both American Falls and Lake Walcott reservoirs with relatively high proportional occurrence (USFWS 2005, p. 119).

Degraded Water Quality

In the 1992 final listing rule, we stated: "The quality of water in [snail] habitats has a direct effect on the species [sic] survival. The [Utah valvata snail] require[s] cold, well-oxygenated unpolluted water for survival. Any factor that leads to deterioration in water quality would likely extirpate [the Utah valvata snail]" (57 FR 59252). As described above in the **Species Information** section, our understanding of the species' habitat requirements has changed substantially since 1992. Furthermore, new information has become available indicating (a) improvements to Snake River water quality where the species lives, and (b) that Utah valvata snails inhabit and persist in reaches of the Snake River rich in nutrients (*e.g.,* nitrogen and phosphorus).

Factors that are known to degrade water quality in the Snake River include reduced water flow, warming due to impoundments, and increases in the concentration of nutrients, sediment, and pollutants reaching the river from agricultural and aquaculture inputs (USFWS 2005, p. 106). In the 1990s and early 2000s, several water-quality assessments were completed for the Snake River by the USEPA, USBR, U.S. Geological Survey (USGS), and IPC. All of these assessments generally demonstrate that water quality in the Snake River of southern Idaho meets Idaho's water-quality criteria for the protection of aquatic life for some months of the year, but may be poor in reservoirs or during summer when temperatures are high and flows are low (Clark *et al.* 1998, pp. 20–21, 24–27; Clark *et al.* 2004, pp. 38–40; Clark and Ott 1996, p. 553; Clark 1997, pp. 1–2, 19; Meitl 2002, p. 33).

Several reaches of the Snake River are classified as water-quality-impaired due to the presence of one or more pollutants (*e.g.,* Total Phosphorus (TP), sediments, total coliforms) in excess of State or Federal guidelines. Nutrient-enriched waters primarily enter the Snake River via springs, tributaries, fish-farm effluents, municipal waste-treatment facilities, and irrigation returns (USEPA 2002, pp. 4–18 to 4–24). 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. Elevated levels of fine sediments, nitrogen, and trace elements (including cadmium, chromium, copper, lead, and zinc) have been measured immediately downstream of several aquaculture discharges (Hinson 2003, pp. 42–45). Additionally, concentrations of lead, cadmium, and arsenic have been detected in snails collected from the Snake River (Richards *in litt.* 2003).

The effects of pollutants detected in the Snake River (*e.g.,* metals, pesticides, excess nutrients) on the growth, reproduction, and survival of the Utah valvata snail have not been evaluated. The Utah valvata snail has been documented to occur in low-oxygen, organically-enriched sediments with heavy macrophyte communities downstream of an aquaculture facility (RM 588) (Hinson 2003, p. 17), indicating that the species may not be as sensitive to these pollutants as we once believed. Based on the best available data, we are not aware that water quality in the Snake River limits growth, reproduction, or survival of the Utah valvata snail in any portion of its range.

Although several reaches of the Snake River are classified as water quality impaired (see further discussion below in Factor D), there have been improvements in Total Suspended Solids (TSS) in certain reaches of the River, primarily as a result of changing irrigation practices between 1990 and 2005. There have also been substantial declines in TP from changing agricultural practices and changing aquaculture feeds in the middle Snake River downstream of Lake Walcott. Data collected by the Idaho Department of Environmental Quality (IDEQ) show decreases of TSS near 64 percent compared to 1990 levels, and decreases of TP near 33 percent compared to 1990 levels (Buhidar *in litt.* 2006). The specific water-quality parameters required for the survival and persistence of the Utah valvata snails are not known. However, the Utah valvata snail occurs over a relatively large documented range of over 255 river miles (410 km) (USFWS 2005, pp. 110–113) and has the ability to tolerate and persist in a variety of aquatic habitats with some degree of water-quality degradation (Lysne and Koetsier 2006, pp. 234–237). For example, studies conducted by the USBR in 2003 in Lake Walcott Reservoir indicated the highest Utah valvata snail densities occurred in the lower reservoir, where the sediments had the greatest percentage of organic content (an indicator that oxygen levels are likely low) (Hinson 2006, p. 19).

Summary of Factor A: Our understanding of the habitat needs of the Utah valvata snail has changed substantially since the species was listed in 1992. Compared to our knowledge at the time of listing, survey data collected since 1992 indicate that the geographic range of the species in the Snake River is approximately 122 river miles (196 km) longer and that the species occurs on a variety of substrate types (*e.g.,* fines to cobble size) and in varying water flows and depths. The Utah valvata snail also tolerates a wider range of water-quality parameters (*e.g.,* dissolved oxygen and temperature) than was originally believed. Threats pertaining to the construction of new hydropower dams as cited in the 1992 final rule no longer exist as the plans for dam construction have expired or been withdrawn. The operation of existing hydropower dams and reservoirs upstream of Minidoka Dam primarily affect the distribution of the Utah valvata snail along shoreline areas due to fluctuating flows and seasonal dewatering; however, the species persists throughout these reservoirs with relatively high proportional occurrence. The available information does not suggest that degraded water quality in the Snake River is affecting the species' population numbers or distribution. Evidence indicates that improvements have been made in Snake River water-quality parameters, including TSS and TP in some Snake River reaches, since listing. Therefore, based on the best available scientific and commercial data, threats of present or future destruction, modification, or curtailment of the Utah valvata snail's habitat or range do not rise to the level such that the species meets the definition of either endangered or threatened under the Act.

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

There is no known commercial or recreational use of the species and collections for scientific or educational purposes are limited in scope and extent. While collection could result in mortality of individuals within a small area, they are unlikely to have population-level effects because only a few individuals and institutions are interested in collecting the species and the life-history strategy of the species makes populations relatively resilient to limited mortality (*i.e.,* invests little in reproduction, relatively high reproductive output (many eggs laid at a time), early age of reproduction, and short lifespan). Therefore, based on the best available scientific and commercial data, threats from overutilization for commercial, recreational, scientific, or educational purposes to the Utah valvata snail do not rise to the level such that the species meets the definition of either endangered or threatened under the Act.

Factor C. Disease or Predation

Parasitic trematodes similar to those of the genus *Microphallus* have been identified in some freshwater snails (*e.g., Pyrgulopsis robusta*) that share similar habitats in the Snake River in Idaho (Dybdahl *et al.* 2005, p. 8). However, the occurrence of trematode parasites on the Utah valvata snail has not been studied.

Predators of the Utah valvata snail have not been documented; however, we assume that some predation by native and nonnative species occurs. Aquatic snails in general are prey for numerous invertebrates and vertebrates (Dillon 2000, pp. 274–304), and predation on other aquatic snails by crayfish and fish is well documented (Lodge *et al.* 1994, p. 1265; Martin *et al.* 1992, p. 476; Merrick *et al.* 1992, p. 225; Lodge *et al.* 1998, p. 53; McCarthy and Fisher 2000, p. 387).

While disease or predation likely results in some Utah valvata snail mortality, the life-history strategy of the species makes populations relatively resilient to limited mortality (i.e., invests little in reproduction, relatively high reproductive output (many eggs laid at a time), early age of reproduction, and short lifespan). Therefore, based on the best available scientific and commercial data, threats from disease or predation to the Utah valvata snail do not rise to the level such that the species meets the definition of either endangered or threatened under the Act.

Factor D. Inadequacy of Existing Regulatory Mechanisms

In the 1992 final listing rule, we found inadequate regulatory mechanisms to be a threat because: (1) Regulations were inadequate to curb further water withdrawal from groundwater spring outflows or tributary spring streams; (2) it was unlikely that pollution-control regulations would reverse the trend in nutrient loading any time soon; (3) there was a lack of State-mandated protections for invertebrate species in Idaho; and (4) regulations did not require FERC or the U.S. Army Corps of Engineers to address Service concerns regarding licensing hydroelectric projects or permitting projects under the Clean Water Act (33 U.S.C. 1251 *et seq.*) for unlisted snails. Below, we address each of these four concerns.

Groundwater Withdrawal Regulations

Since 1992, new information has become available clarifying the habitat requirements of the Utah valvata snail. The species is not limited to cool, fast-water, or lotic habitats, or perennial flowing waters associated with large spring complexes, as previously believed. The species is able to live in a variety of aquatic habitats, and is locally abundant throughout a 255-mile (410 km) stretch of the Snake River in tributary streams, in the mainstem Snake River, and in reservoirs that are managed for annual drawdowns.

The Idaho Department of Water Resources (IDWR) manages water in the State of Idaho. Among the IDWR's responsibilities is the development of the State Water Plan (IDWR *in litt.* 1996). The State Water Plan was updated in 1996, and included a table of federally endangered and threatened species in Idaho, including five Snake River aquatic snails listed as endangered or threatened in 1992: The Utah valvata snail, Idaho springsnail (*Pyrgulopsis* (=*Fontelicella*) *idahoensis*) (delisted in 2007), Snake River Physa (*Physa natricina*), Bliss Rapids snail (*Taylorconcha serpenticola*), and Banbury Springs Lanx (*Lanx* n sp. (undescribed)) (see 57 FR 59244). The State Water Plan outlines objectives for the conservation, development, management, and optimum use of all unappropriated waters in the State. One of these objectives is to "maintain, and where possible enhance water quality and water-related habitats" (IDWR *in litt.* 1996). It is the intent of the State Water Plan that any water savings realized by conservation or improved efficiencies is appropriated to other beneficial uses (*e.g.,* fish and wildlife, hydropower, or agriculture). Another IDWR regulatory mechanism is the ability of the Idaho Water Resource Board to appropriate water for minimum stream flows when in the public interest (IDWR *in litt.* 2010).

Since 1992, the IDWR and other State agencies have also created additional regulatory mechanisms that limit future surface and groundwater development, including the continuation of various moratoria on new consumptive water rights and the designation of Water Management Districts (Caswell *in litt.* 2007). The State is working with numerous interested parties to stabilize aquifer levels and enhance cold-water-spring outflows that feed into the Snake River within the range of the Utah valvata snail. In 2008, the Idaho Legislature approved House Bill 428 establishing the Statewide Comprehensive Aquifer Planning and Management Program (SCAPMP) (I.C. section 42–1779) and House Bill 644 which created the Aquifer Planning and Management Fund (I.C. section 42–1780) (State of Idaho *in litt.* 2008a, 2008b). Under the SCAPMP, the Eastern Snake River Plane Aquifer (ESPA) was identified for management planning (IDWR 2009, entire). In 2009, the ESPA Comprehensive Aquifer Management Plan (CAMP) was made final. The goal of the ESPA CAMP is to "sustain the economic viability and social and environmental health of the Eastern Snake Plain by adaptively managing a balance between water use and supplies" (IDWR 2009, p. 4). The ESPA CAMP "establishes a long-term program for managing water supply and demand in the ESPA through a phased approach to implementation, together with an adaptive management process to allow for adjustments or changes in management techniques as implementation proceeds" (IDWR 2009, p. 4). The long-term objective of the ESPA CAMP is a net increase of 600,000 acre-feet of water annually by the year 2030 (IDWR 2009, p. 4). However, this is a discretionary document and does not have regulatory authority.

In 2005, Congress and the Idaho Legislature approved the Snake River Water Rights Agreement (SRWRA) in the Snake River Basin Adjudication (SRBA) (State of Idaho *in litt.* 2005a; USA *in litt.* 2004). The Snake River Component of the SRWRA allows the USBR to lease up to 427,000 acre-feet of water for flow augmentation, and acquire up to 60,000 acre-feet of water rights from the Snake River between Milner (RM 639) and Swan Falls (RM 458), increasing total flow augmentation up to 487,000 acre-feet within the range of the Utah valvata snail (IDWR *in litt.* 2004). In 2005, the USBR acquired water rights through a 30-year lease with the State of Idaho for 98,000 acre-feet of water from the Bell Rapids Mutual Irrigation Company (State of Idaho *in litt.* 2005b). This will potentially benefit the Utah valvata snail by increasing available wetted areas and connectivity of available habitats within the range of the species.

The State of Idaho established moratoria in 1993 (the year after the Utah valvata's listing) that restricted further surface-water and groundwater withdrawals for consumptive uses from the Snake River Plain aquifer between American Falls Reservoir (RM 714.1) and C.J. Strike Reservoir (RM 494). The 1993 moratoria, extended by Executive Order in 2004 (Caswell *in litt.* 2006, attachment 1), have not yet resulted in stabilization of the Snake River Plain aquifer levels. Depletion of spring flows and declining groundwater levels are a collective effect of drought conditions, changes in irrigation practices (the use of central-pivot sprinklers contribute little to groundwater recharge), and groundwater pumping (University of Idaho *in litt.* 2010).

Although we anticipate groundwater levels in the Snake River Plain aquifer will likely continue to decline in the near future, even as water-conservation measures are developed and implemented, this is unlikely to endanger or threaten the Utah valvata snail given the species' distribution over a 255-mile (410-km) range and its ability to survive and persist in a wide variety of aquatic habitats not dependent upon Snake River Plain groundwater outflows.

Pollution Control Regulations

Since 1992, reductions in sediment (TSS) and phosphorus (TP) loading have improved water quality in localized reaches of the Snake River (Buhidar *in litt.* 2005) (see Factor A above). Various State-managed water-quality programs are being implemented within the range of the Utah valvata snail. These programs tier off the Clean Water Act (CWA), which requires States to establish water-quality standards that provide for (1) the protection and propagation of fish, shellfish, and wildlife, and (2) recreation in and on the water. As required by the CWA, Idaho has established water-quality standards (*e.g.,* for water temperature and dissolved oxygen) for the protection of cold-water biota (*e.g.,* invertebrate species) in many reaches of the Snake River. The CWA also specifies that States must include an anti-degradation policy in their water quality regulations that protects water-body uses and high-quality waters. Idaho's anti-degradation policy, updated in the State's 1993 triennial review, is detailed in their Water Quality Standards (IDEQ *in litt.* 2009).

The IDEQ works closely with the USEPA to manage point and non-point sources of pollution to water bodies of the State through the National Pollutant Discharge Elimination System (NPDES) program under the CWA. IDEQ has not been granted authority by the USEPA to issue NPDES permits directly; all NPDES permits are issued by the USEPA Region 10 (USEPA *in litt.* 2010). These NPDES permits are written to meet all applicable water-quality standards established for a water body to protect human health and aquatic life. Waters that do not meet water-quality standards due to point and non-point sources of 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 2 years. 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. In water bodies that are currently not meeting water-quality standards, the TMDL approach applies pollution-control strategies through several of the following programs: State Agricultural Water Quality Program, Clean Water Act section 401 Certification, Bureau of Land Management (BLM) Resource Management Plans, the State Water Plan, and local ordinances. Since the time of listing in 1992, the following TMDLs have been approved by the USEPA (approval year(s) in parentheses) within the Utah valvata range: The Big Wood River (2002), Billinglsey Creek (2005), Blackfoot River (2002, 2007), Idaho Falls (2004), Lake Walcott (2000, 2007), Little Wood River (2005), Palisades (2002), Portneuf River (2001), Raft River (2004), Snake River—King Hill to C.J. Strike (2006), Middle Snake River—aquaculture wasteload allocation (2005), and the Teton River (a tributary of Henry's Fork of the Snake River) and Teton River Supplement (2003). Implementation plans that specify pollution-control strategies and monitoring needed to meet TMDL recommendations and goals are either in place or under development for 9 of these 12 areas (IDEQ_2010a; 2010b).

State Invertebrate Species Regulations

There are no specific State regulatory protections for the Utah valvata snail in Idaho. The primary threats to the species, as identified in our 1992 listing rule, were related to the loss or alteration of its aquatic habitats. The lack of specific regulations protecting individual Utah valvata snails does not, by itself, imply that the species is endangered or threatened.

While there are no State regulatory protections for the Utah valvata snail, it is considered a Species of Greatest Conservation Need (SGCN) as identified in the State of Idaho Comprehensive Wildlife Conservation Strategy (CWCS) (IDFG 2005 p. 4–75). The aim of the CWCS is to provide a common framework that will enable conservation partners to jointly implement a long-term approach for the benefit of SGCN through proactive conservation to promote cost-effective solutions instead of reactive measures enacted in the face of imminent losses (IDFG 2005, p. V).

Federal Consultation Regulations

The threat of insufficient regulatory mechanisms to address Utah valvata conservation needs in the 1992 listing rule was primarily related to the proposed construction of six hydroelectric dams within the suspected, limited geographic range of the species, coupled with our belief at the time of listing that the species required cold, fast-water, or lotic habitats, and was negatively impacted by dams that inundated free-flowing river environments. As previously described, hydroelectric dams are no longer being proposed for construction in the middle Snake River, and our understanding of Utah valvata snail geographic range, ecology, and habitat requirements has changed. Thus, the importance of a regulatory mechanism to address these threats is no longer a significant issue with regard to the conservation of the Utah valvata snail.

Summary of Factor D: Although there are no specific State regulations protecting the Utah valvata snail, it is considered a SGCN as identified in the Idaho CWCS. The primary threats identified in the final listing rule were related to the loss or alteration of the species' habitat. Furthermore, as our understanding of the species' habitat requirements has changed, so has our understanding of the species' conservation and regulatory needs. Regulatory mechanisms such as Idaho's water-quality standards and TMDLs will continue to apply to habitats occupied by Utah valvata snails. Therefore, based on the best available scientific and commercial data, threats from inadequate regulatory mechanisms to the Utah valvata snail do not rise to the level such that the species meets the definition of either endangered or threatened under the Act.

Factor E. Other Natural or Manmade Factors Affecting the Species' Continued Existence

Invasive Species

The final listing rule stated that nonnative New Zealand mudsnails were not yet abundant in cold-water spring flows with colonies of the Utah valvata snail, but that they likely did compete with the species in the mainstem Snake River habitats (57 FR 59254). Surveys have found that Utah valvata snails and New Zealand mudsnails frequently co-occur in cold-water spring, mainstem Snake River, and reservoir habitats (37 percent co-occurrence in combined habitat types), which may indicate that these two species are able to co-exist or that they actually have slightly different resource preferences (*e.g.,* periphytic vs. perilithic algae) (Hinson 2006, p. 42). However, Hinson (2006, p. 41) also notes that the overlap in habitat utilization between the Utah valvata snail and the New Zealand mudsnail could lead to direct competition for resources between these two species.

In 2002 and 2004, the USBR reported that New Zealand mudsnails were increasing in Lake Walcott, yet the densities observed were substantially lower than those observed in mainstem Snake River habitats (USBR 2003, p. 19; USBR 2005, p. 6). Further upstream, surveys conducted throughout American Falls Reservoir indicate that the distribution of New Zealand mudsnails appears to be limited to the upper end of American Falls Reservoir near the input of the Snake and Portneuf rivers (USBR 2003, p. 21), where the habitat is not dewatered due to water withdrawals for irrigation. Surveys conducted even further upstream in the Snake River and tributaries (Fields 2005, pp. 8–12) found moderate-to-high densities of the New Zealand mudsnail at five sites. However, Fields (2005, p. 10) stated that the current distribution of New Zealand mudsnails in the Snake River above American Falls Reservoir could more strongly reflect patterns of introductions rather than habitat preferences. Populations of the New Zealand mudsnail are not known to occur in the Wood River, where a small native or introduced population of the Utah valvata snail is thought to occur. The overall impact on the Utah valvata snail from the nonnative New Zealand mudsnail is not fully understood (Lysne 2003, pp. 85–86; Hinson 2006, p. 41). However, after approximately 20 years of co-occurrence, there is no evidence suggesting that the New Zealand mudsnail has supplanted or poses an extinction risk to the Utah valvata snail (Gates *in litt.* 2009).

Climate Change

There is compelling evidence that we are living in a time of rapid, worldwide climate change. Although the extent of warming likely to occur is not known with certainty at this time, the Intergovernmental Panel on Climate Change (IPCC) has concluded that warming of the climate is unequivocal, and that continued greenhouse gas emissions at or above current rates will cause further warming (IPCC 2007, p.

30). For example, 11 of the last 12 years evaluated (1995–2006) rank among the 12 warmest years since 1850 (ISAB 2007, p. iii). In the Pacific Northwest, regionally averaged temperatures have risen 1.5 degrees F (0.8 degrees C) over the last century, and are projected to increase by another 3 to 10 degrees F (1.5 to 5.5 degrees C) over the next 100 years (Mote *et al.* 2003, p. 54; Karl *et al.* 2009, p. 135). While the specific effects of global climate change on the Utah valvata snail are unclear, aquatic species and their habitats may be particularly vulnerable to changes in temperatures and precipitation patterns.

Rising temperatures due to climate change can affect aquatic species, such as the Utah valvata snail, by altering the timing and precipitation events in the Pacific Northwest (Karl *et al.* 2009, p. 135). Increased cool season temperatures cause precipitation to fall in the form of rain as opposed to snow, contributing to earlier snowmelt, earlier timing of spring runoff, and lower water levels during the warm season (Karl *et al.* 2009, p. 135). Many fish and wildlife species in the Pacific Northwest, especially aquatic species, are dependent on the timing of spring snowmelt runoff (Karl *et al.* 2009, p. 135). Areas along the warmer western slopes of the Cascade Mountains are projected to see a 30 percent or more reduction in warm season runoff by mid-century, while the interior, colder areas along the Rocky Mountains are projected to experience a smaller, 10 percent reduction in spring runoff (Karl *et al.* 2009, p. 135). Summer flows will also likely decrease while water temperature will increase, thereby stressing many aquatic organisms, especially those that have narrow temperature and depth requirements.

Despite projected changes in climate in the Pacific Northwest, we now know the Utah valvata snail is not as specialized in its habitat needs as we thought at the time of listing and can persist in a broad range of water flows, depths, and temperatures. In the Snake River, the species inhabits a diversity of aquatic habitats throughout its 255-mile (410 km) range, including cold-water springs, spring creeks and tributaries, mainstem and free-flowing waters, reservoirs, and impounded Snake River reaches. The species occurs on a variety of substrate types including both fine sediments and more coarse substrates in areas both with and without macrophytes. It has been collected at a wide range of water depths, ranging from less than 3.2 feet (1 meter) to greater than 45 feet (14 meters), and at water temperatures ranging from 37.4 to 75.2 degrees F (3 to 24 degrees C).

Summary of Factor E: The New Zealand mudsnail frequently co-occurs with the Utah valvata snail and may be competing for habitat or food. The New Zealand mudsnail can reach extremely high densities in the middle Snake River (Richards *et al.* 2001, p. 375), and has been recorded at moderate-to-high densities at five sites in tributaries to the Snake River and the Snake River above American Falls Reservoir. Populations of the New Zealand mudsnail are not known to occur in the Wood River. The precise impact on the Utah valvata snail from the invasion of the New Zealand mudsnail is unknown (Lysne 2003, pp. 85–86; Hinson 2006, p. 41). However, after approximately 20 years of co-occurrence, there is no evidence suggesting that the New Zealand mudsnail has supplanted or caused local extirpations of the Utah valvata snail.

Further, while numerous scientific studies indicate that the world is warming due to anthropogenic causes, and that increasing temperatures will impact precipitation patterns in the Pacific Northwest, it is difficult at this time to determine the precise effects this change will have on the Utah valvata snail. Nevertheless, given the wide variety of habitat conditions, water depths, and temperature ranges the Utah valvata snail has been found to occupy, the species is likely to be resilient to moderate changes in temperature and precipitation patterns. Therefore, threats from other natural or manmade factors do not rise to the level such that the species meets the definition of either endangered or threatened under the Act.

Conclusion

As required by the Act, we considered potential threat factors to assess whether the Utah valvata snail is endangered or threatened throughout its range. Information collected since the species' listing in 1992 indicates that the Utah valvata snail is widely distributed and occurs in a variety of ecological settings over a 255-mile range of the Snake River. Much of the Snake River within the range of the Utah valvata is influenced by seasonal dam operations for hydroelectric or agricultural purposes, yet the species persists in these varied mainstem Snake River systems, including impounded reservoir habitats (*e.g.,* Lake Walcott and American Falls reservoirs). None of the threats that we identified in the 1992 listing determination appear to be significant to the species (individually or in combination) in light of our current understanding of its distribution and life history; nor have we identified any significant new threats to the species. Therefore, we find that the Utah valvata snail is not in danger of extinction throughout its range, nor is it likely to become so in the foreseeable future.

The Service has determined that the original data for classification of the Utah valvata snail used in 1992 were in error. However, it is important to note that the original data for classification constituted the best scientific and commercial data available at the time and were in error only in the sense that they were incomplete when viewed in context of the data now available. The primary considerations to delist the Utah valvata snail are described in the five-factor analysis above.

Having determined that the Utah valvata snail does not meet the definition of endangered or threatened throughout its range, we must next consider whether there are any significant portions of its range that are in danger of extinction or are likely to become endangered in the foreseeable future. A portion of a species' range is significant if it is part of the current range of the species and is important to the conservation of the species because it contributes meaningfully to the representation, resiliency, or redundancy of the species. The contribution must be at a level such that its loss would result in a decrease in the ability to conserve the species.

Applying the definition described above, we first address whether any portions of Utah valvata's range warranted further consideration. Based on a genetic study of the Utah valvata snail (Miller *et al.* 2006a) and the ecological settings in which the species occurs throughout its range, three potential population units could be analyzed as to whether they constituted a significant portion of its range: The Wood River population unit (WRM 35), the Snake River population unit (RM 585 through RM 837), and the Hagerman population unit (isolated springs adjacent to the Snake River at RM 585). We then evaluated whether each unit constitutes a significant portion of the range of the species, and if so, whether that portion was endangered or threatened.

Wood River Population Unit

There is a high degree of uncertainty concerning the distribution and abundance of the species in the Wood River since there has been only one documented colony and systematic surveys have not been conducted. Based on the limited information we have on the Utah valvata snail in the Wood River, this colony does not appear to exist in an unusual or unique ecological setting or contain a large portion of the habitat or individuals (in fact, it appears to constitute an extremely small portion of the overall habitat and number of individuals). Further, a genetics study conducted by Miller *et al.* (2006a, pp. 2367–2372) found that the Wood River occurrence is not genetically divergent or unique from the Snake River population unit. Because of genetic similarities between Utah valvata snails in the Snake River and Wood River units, the Wood River unit could provide some redundancy to the species if the Snake River unit (see below for further information) is extirpated by a catastrophic event. However, given that Utah valvata snails are distributed discontinuously along 255 miles (410 km) of the Snake River unit, a catastrophic event of the magnitude necessary to simultaneously eliminate all Utah valvata snail colonies from the Snake River unit is highly unlikely. In addition, due to the geographic separation of the Wood River unit from the Snake River unit, it is unlikely that the Wood River unit would be a significant source of snails to recolonize the Snake River. Given these factors, we determined the Wood River population unit did not provide a significant contribution to the species with regard to redundancy, resiliency, and representation, and was not evaluated further.

Snake River Population Unit

The Snake River population unit contains the largest and widest ranging portion of the overall Utah valvata snail population and contributes substantially to the resiliency, representation, and redundancy of the species. Other information contributing to its significance includes: (1) The uppermost reaches of the Snake River unit, including the Henry's Fork River where Utah valvata snail occurs, is not influenced by dam and other water management operations, and water quality is considered to be better than that found in the Wood River or Hagerman reaches further downstream in the Snake River; (2) Lower Lake Walcott Reservoir has high densities and high proportional occurrence of the Utah valvata snail and likely provides refugia for the species primarily due to the human-induced stability of this reservoir environment; and (3) genetically, the Snake River population unit represents the ancestral haplotypes of this species (Miller et al. 2006a, p. 2368). For all of these reasons, we determined that the Snake River population unit of the Utah valvata snail constitutes a significant portion of the species' range. The Snake River population unit was then evaluated to determine if the Utah valvata snail is endangered or threatened in this portion of its range.

The Utah valvata snail is widely distributed and occurs in a variety of ecological settings in this population unit, including impounded reservoir habitats (*e.g.,* Lake Walcott and American Falls reservoirs). Water quality is relatively good in the upstream (Henry's Fork) reaches of this unit compared to other population units, and the New Zealand mudsnail has not become established throughout this unit. None of the threats that we identified in the 1992 listing determination appear to be significant to the Utah valvata snail in this population unit (individually or in combination) in light of our current understanding of its distribution and life history; nor have we identified any significant new threats to the species in this unit (see Rangewide analysis, above). Therefore, we find that the Utah valvata snail in the Snake River Population Unit is not in danger of extinction, nor is it likely to become so in the foreseeable future.

Hagerman Population Unit

The best available data indicate that the Hagerman population unit is likely isolated and separated geographically from other Utah valvata snail colonies farther upstream that constitute the Snake River population unit, but overall represents a small area of occupancy compared to the rest of the range of the species. The geographic isolation of the Hagerman population unit is an important consideration; the Miller et al. (2006) genetics paper suggests that Utah valvata snails found in cold-water spring outflows at the Thousand Springs Preserve may have been genetically isolated for over 10,000 years and should be evaluated to determine if they can reproduce with other Utah valvata snails elsewhere in their range. This population unit also has a unique ecological setting compared to the other two units, as the species mainly occurs in tributary springs (and at their cold-water outflows), and not in reservoir or riverine habitats.

In light of the above, we concluded that the Hagerman population unit may constitute a significant portion of the range of the Utah valvata snail. The Hagerman population unit was then evaluated to determine if the Utah valvata snail is endangered or threatened in this portion of its range.

Currently, water quality is not considered to be a threat that is of high severity or magnitude to the Hagerman population unit for the reasons outlined in Factor A of the rangewide analysis. Furthermore, two cold-water spring outflows, Box Canyon and Thousand Springs, provide a relatively high-quality and stable aquatic environment for some Utah valvata snail colonies. Although flows have recently declined in some cold-water springs due to groundwater withdrawals, and water quality and quantity could decrease over time if flows are not preserved, the Utah valvata snail would continue to persist in the mainstem Snake River in the Hagerman reach where it can tolerate variable water temperatures and water quality. Although there is evidence of some density-dependent effects and competition where the New Zealand mudsnail co-occurs with the Utah valvata snail, the Utah valvata snail continues to persist in these habitats. Despite approximately 20 years of co-occurrence of the New Zealand mudsnail and Utah valvata snail, there is no evidence suggesting that the New Zealand mudsnail has caused local extirpations of the Utah valvata snail in Hagerman reach. Therefore, we conclude that the Hagerman population unit of the Utah valvata snail is not endangered or threatened in this portion of its range.

In summary, our understanding of the Utah valvata snail's habitat requirements, range, and threats has changed since the time of listing. From studies conducted since 1992, we now know that the species occurs over a much larger geographic range in the Snake River, is able to live in a variety of aquatic habitats, and is not limited to cold, fast-water, or lotic habitats, or to perennial flowing waters associated with large spring complexes, as previously believed. In addition, the proposed construction of six new hydropower facilities as discussed at the time of listing is no longer a threat. The Utah valvata snail is now known to occur in, and persist in, aquatic habitats influenced by dam operations (*e.g.,* reservoirs, and at elevated water temperatures), and the species co-exists in a variety of Snake River aquatic habitats with the invasive New Zealand mudsnail. We have determined that none of the existing or potential threats, either alone or in combination with others, are likely to cause the Utah valvata snail to become in danger of extinction within the foreseeable future throughout all or any significant portion of its range. The Utah valvata snail no longer requires the protection of the Act, and, therefore, we are removing it from the Federal List of Endangered and Threatened Wildlife.

Effects of This Rule

This rule revises 50 CFR 17.11(h) to remove the Utah (desert) valvata snail from the List of Endangered and Threatened Wildlife. Because no critical habitat is designated for this species, this rule does not affect 50 CFR 17.95.

The prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, no longer apply. Federal agencies are no longer required to consult with us to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of this species.

Required Determinations

Paperwork Reduction Act of 1995

Office of Management and Budget (OMB) regulations at 5 CFR 1320, which implement provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) require that Federal agencies obtain approval from OMB before collecting information from the public. This rule does not contain any new collections of information that require approval by Office of Management and Budget (OMB) under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have determined that we do not need to prepare an Environmental Assessment or Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), in connection with regulations 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).

References Cited

A complete list of all references cited in this rule is available upon request from the Idaho Fish and Wildlife Office (see **ADDRESSES**).

Authors

The primary authors of this document are staff members of the Idaho Fish and Wildlife Office, U.S. Fish and Wildlife Service (see **ADDRESSES**).

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

■ Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

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; 16 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 for “Snail, Utah valvata” under “SNAILS” from the List of Endangered and Threatened Wildlife.

Dated: August 9, 2010.

Wendi Weber,

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

[FR Doc. 2010–20517 Filed 8–24–10; 8:45 am]

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