FOR FURTHER INFORMATION CONTACT: Kim Johnson at (913) 551–7975.

SUPPLEMENTARY INFORMATION: See the information provided in the direct final rule which is located in the rules section of the **Federal Register**.

Dated: August 12, 2002.

William A. Spratlin,

Acting Regional Administrator, Region 7.

[FR Doc. 02–22088 Filed 8–29–02; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; 12-Month Finding for a Petition To List the Wasatch Front Columbia Spotted Frog as Threatened Throughout Its Range

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of petition finding.

SUMMARY: The U.S. Fish and Wildlife Service (Service) announces a 12-month finding on a petition to amend the List of Endangered and Threatened Wildlife. After review of all available scientific and commercial information, the Service has determined that, pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), listing the Wasatch Front population of the Columbia spotted frog (*Rana luteiventris*) is not warranted.

DATES: The finding announced in this notice was approved on August 23, 2002. Comments and information may be submitted until further notice.

ADDRESSES: Questions, comments, and additional information regarding this finding should be sent to Mr. Henry Maddux, Field Supervisor, U.S. Fish and Wildlife Service, 2369 West Orton Circle, West Valley City, UT 84119. Comments and materials received will be available on request for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Jessica Gourley, e-mail <*jess_gourley@fws.gov*>, or Laura Romin, email <*laura_romin@fws.gov*>, (see **ADDRESSES** section), telephone (801) 975–3330.

SUPPLEMENTARY INFORMATION:

Background

On May 1, 1989, the Service received a petition from the Board of Directors of the Utah Nature Study Society requesting the Service to add the spotted frog (then referred to as *Rana pretiosa*) to the List of Threatened and Endangered Species and to specifically consider the status of the Wasatch Front, Utah, population. The petitioners stated that ''the spotted frog's present range in the lower 48 states is greatly reduced from its historic range,'' and that ''the current status [of the species] is greatly reduced from historic times.'' The petitioners further indicated that the ''scientific importance of the spotted frog is that this species lives in many disjunct populations that reflect Pleistocene populations.'' Threats identified by the petitioners included loss of habitat (caused by dam and reservoir construction, alteration of drainage patterns, urban and agricultural use of water, and highway and bridge construction); introductions of exotic species; lack of inventories of native wetland animals; insufficient impact analyses conducted prior to development; and inadequate mitigation activities. In addition, the petitioners alluded that Federal and State laws and regulations do not adequately protect wetlands and riparian areas for the spotted frog.

The Service published a notice of a 90-day finding in the **Federal Register** (54 FR 42529) on October 17, 1989, concluding there was substantial information that the petitioned action may be warranted. Concurrent with publishing the notice, the Service initiated a status review. The period of the status review was prolonged because, throughout its wide range, there was a lack of quantitative information documenting the spotted frog's current distribution and status. Genetics research raised further questions regarding the appropriateness of the then-current taxonomic classification of spotted frog populations.

A notice of the 12-month petition finding was published in the **Federal Register** (58 FR 27260) on May 7, 1993. In the 12-month petition finding, the Service determined that listing the spotted frog as threatened in some portions of its range was warranted but precluded by other higher priority listing actions. Based on geographic and climatic separation and supported by genetic separation (Green 1991), the Service found five Distinct Population Segments (DPS) of spotted frogs throughout its range—(1) the main population (Alaska, British Columbia, Alberta, Wyoming, Montana, north and central Idaho, eastern Washington, and northeastern Oregon), (2) the Great Basin (southern Idaho and Nevada), (3) West Coast (western Washington, Oregon, Idaho, and Nevada), (4) the Wasatch Front, Utah, and (5) the West Desert, Utah. Separation of the West Desert and Wasatch Front DPSs in Utah is supported by geographic isolation in addition to ecological and demographic distinctiveness (Bos and Sites 2001).

Four of the five DPSs (all but the main population) were found to be warranted but precluded by higher listing priorities; both Utah populations were designated as candidates for listing. In Utah, the Wasatch Front population was assigned a listing priority number of three because the magnitude of the threats were high and imminent, while the West Desert population was assigned a listing priority of nine because of moderate to low threats.

On November 15, 1994, the Service published a Candidate Notice of Review in the **Federal Register** for the four candidate DPSs (59 FR 58982). The listing priority for the West Desert DPS was increased from nine to six. In the Service's September 19, 1997, Candidate Notice of Review, the scientific and common name of the Wasatch Front, West Desert, and Great Basin DPSs were changed to *Rana luteiventris* and Columbia spotted frog respectively, based on new genetics information (Green *et al.* 1997).

On November 28, 1997, the Service announced the availability of a Draft Conservation Agreement for the Wasatch Front and West Desert populations (Utah) of the Columbia spotted frog (*Rana luteiventris*) (62 FR 63375). The Service received a request to extend the comment period, and on December 24, 1997, announced that the comment period on the Draft Conservation Agreement had been extended until January 16, 1998 (62 FR 67398). The Service subsequently signed the Conservation Agreement on February 13, 1998, in cooperation with the Utah Division of Wildlife Resources (UDWR), Bureau of Land Management, Bureau of Reclamation, Utah Reclamation Mitigation and Conservation Commission, Central Utah Water Conservancy District, and the Confederated Tribes of the Goshute Federation.

The goal of this interagency Conservation Agreement is to ensure the long-term conservation of the Columbia spotted frog within its historical range in Utah. The Conservation Agreement established a mechanism for the recovery of the spotted frog through interagency cooperation, coordination of conservation efforts, and development of recovery priorities. Due to numerous activities and studies in addition to and pursuant with the Conservation Agreement, we determined that the

status of the Columbia spotted frog in Utah had improved and no longer warranted listing under the Act on April 2, 1998 (63 FR 16218). With this finding, both DPSs of Columbia spotted frogs in Utah were removed as candidates for listing on October 25, 1999 (64 FR 57533).

On June 8, 1999, a complaint was filed by the Biodiversity Legal Foundation and Peter Hovingh challenging the not warranted finding as violating the Act and the Administrative Procedure Act. The complaint alleged that the not warranted finding was inconsistent with the 8 years of prior determinations by the Service; that the Wasatch Front population of the Columbia spotted frog deserved listing under the Act; that the Wasatch Front population of the Columbia spotted frog had declined during the course of the 8-year administrative process; that the Conservation Agreement contained future and voluntary actions that had yet to be implemented and had not proven successful at protecting the Wasatch Front population of the Columbia spotted frog; and that all measures identified by the Service as having previously been implemented had either failed, had been rejected by the Service as inadequate, or were adopted to mitigate specific projects that had already destroyed Columbia spotted frogs and their wetland and aquatic habitat.

On August 6, 2001, the plaintiffs and the Government reached a settlement regarding this complaint. The settlement stipulated that we remand for reconsideration the 1998 ''not warranted'' finding and start a new status review and 12-month finding on the Wasatch Front population of the Columbia spotted frog to be completed by July 31, 2002. The Service subsequently published a notice of intent to conduct the 12-month finding on September 10, 2001 (66 FR 47034). The settlement also stated that we would not vacate our previous determination in the interim. Candidate status of this species would not be restored unless and until we determine in the revised 12-month finding that the species is warranted for listing, or warranted but precluded from listing by higher priority listing actions.

Following this settlement, we initiated a review to evaluate the status of the Columbia spotted frog on the Wasatch Front. Comments were received, evaluated, and incorporated where appropriate into this status review. Information included published and unpublished reports, manuscripts, books and data, memoranda, letters, phone communications, email correspondence, and information gathered at meetings. In addition, persons who were species experts on the Columbia spotted frog were provided opportunity to comment on the data used in this report to ensure it was the most accurate and updated information available and that it was interpreted accurately. This status review is available upon request from the Utah Field Office (see **ADDRESSES** above).

The Columbia spotted frog belongs to the family of true frogs, the Ranidae. Color and pattern descriptions of individuals from Utah include brownish-black dorsal coloration with little to no spotting pattern (Colburn, U.S. Fish and Wildlife Service, pers. comm. 1992). Pigmentation on their abdomens varies from yellow to red (Turner 1957). Columbia spotted frogs along the Wasatch Front generally possess a salmon color ventrally, while West Desert and Sanpete County, Utah, populations generally have a yellow to yellow-orange color ventrally.

The spotted frog is closely associated with water (Dumas 1966, Nussbaum *et al.* 1983). Habitat includes the marshy edges of ponds, lakes, slow-moving cool water streams and springs (Licht 1974; Nussbaum *et al.* 1983; Morris and Tanner 1969; Hovingh 1987).

The overall distribution of the Columbia spotted frog is continuous throughout extreme southeastern Alaska, southwestern Yukon, northern British Columbia, and western Alberta; and south through Washington (east of the Cascades), eastern Oregon, Idaho, and western Montana. Its southern extent includes disjunct populations in central and northeastern Nevada, southwestern Idaho, western and north-central Wyoming, and northern Utah (Stebbins 1985; Green *et al.* 1996, 1997, Tanner 1931, Linsdale 1940, Banta 1965, Turner and Dumas 1972, Hovingh 1993, Ross *et al.* 1993, 1994). These disjunct populations are highly fragmented, occurring on isolated mountains and in arid-land springs.

Systematic and taxonomic relationships of spotted frogs occurring in Utah to other spotted frog populations have been described in several manners. Two subspecies of *Rana pretiosa* were described originally (Thompson 1913, Wright and Wright 1949). These two subspecies, *R. p. pretiosa* and *R. p. luteiventris*, were described based on pigmentation characteristics of frogs. As additional specimens were examined, variability of characteristics within and between populations was described (Morris and Tanner 1969). Green et al. (1996) examined allozyme and morphometric variation in *R. pretiosa* and suggested that at least two species were represented, referred to as species A (southwestern Washington and Oregon Cascades) and species B (remainder of range). However, morphometrically the two species were ''almost indistinguishable'' and the authors could not fully delineate the dividing line between the ranges of species A and species B. Based on biochemical and morphological data, Green et al. (1997) concluded that there were two groups at the species level—Oregon spotted frog (*Rana pretiosa*) and Columbia spotted frog (*Rana luteiventris*). They determined that all spotted frog populations occurring within Utah should be taxonomically described as *Rana luteiventris*. On September 19, 1997, the Service updated the common and scientific names of the Utah populations to the Columbia spotted frog, *Rana luteiventris*.

Further analyses of taxonomic relationships among range-wide spotted frog populations were performed by Bos and Sites (2001). This study revealed four genetically distinct lineages. Two of these lineages are represented in Utah—(1) the Deep Creek lineage (Deep Creek-Ibapah population in the West Desert DPS), and (2) the Bonneville lineage (all other populations in Utah, including the Wasatch Front and the remainder of the West Desert DPSs). The Wasatch Front DPS appears to have originated from the West Desert populations in relatively recent evolutionary time, during the recession of Lake Bonneville (Bos and Sites 2001, Toline and Seitz 1999). Therefore, genetic differences between these populations have not yet been established. However, separation of the West Desert and Wasatch Front DPSs is supported by ecological and demographic distinctiveness due to geographic isolation and habitat differences, including disparate biological, chemical, and thermal characteristics of occupied springs and wetlands (Hovingh 1993, U.S. Fish and Wildlife Service 1993). In addition, due to the dependence of spotted frogs on aquatic habitats (Bos and Sites 2001) and population isolation (Toline and Seitz 1999), there is likely no gene flow existing between the Wasatch Front and West Desert DPSs.

The disjunct populations in Utah represent the southern extent of the species range (Stebbins 1985). Post-glacial climatic shifts allowed spotted frog populations to naturally distribute across drainage areas of the Bonneville Basin of Utah. The Bonneville Basin encompasses the area that was covered by ancient Lake Bonneville and which,

today, lies within the Great Basin province. The Great Basin province is distinguished geologically by parallel north-south mountain ranges separated by broad, alluvial desert basins (Christiansen 1951) and valleys. The steep, gravelly slopes of these ranges are prominently marked by benches and other shore features of Lake Bonneville. Springs commonly occur at the base of the mountains (Bick 1966) and in the valley floors. Several aquatic species have maintained an existence as relict populations in these springs, including the Columbia spotted frog, least chub, and several species of mollusks. However, these species are rare and in some areas the populations are declining. Rapid deterioration of aquatic environments, primarily from agricultural practices, has caused other unique Bonneville Basin species, such as *Rhinichthys osculus relictus* (Hubbs and Miller), a subspecies of dace, to become extinct (Hubbs et al. 1974).

The Wasatch Front population occurs in isolated springs or riparian wetlands in Juab, Sanpete, Summit, Utah, Tooele, and Wasatch Counties. Columbia spotted frogs have been extirpated from the Salt Lake Valley and tributaries to the Jordan River and Great Salt Lake due to habitat loss from urban development. Currently, there are seven localized populations of spotted frog that comprise the Wasatch Front population or DPS. The largest known concentration is currently in the Heber Valley; the remaining six locations are Jordanelle/Francis, Springville Hatchery, Holladay Springs, Mona Springs Complex/Burraston Ponds, Fairview, and Vernon. For purposes of this finding, each distinct area within the Wasatch Front DPS that supports reproducing and self-sustaining frogs is referred to as a population.

Spotted frogs are aquatic specialists and more dependent on permanent aquatic habitats than other ranid species (Dumas 1966, Perkins and Lentsch 1998a). The majority of sightings and captures of this species have occurred while the frogs were submersed in water. Range-wide, spotted frogs use a variety of habitat types including cold water ponds, streams, lakes, and springs adjacent to mixed coniferous and subalpine forest, grassland, and brush land (Morris and Tanner 1969, Stebbins 1985). On the Wasatch Front, they are usually found in emergent wetlands associated with riparian or isolated spring-fed habitat with cool and organic substrates (Dumas 1966, Morris and Tanner 1969, Cuellar 1994). Habitat usually consists of a small spring, pond, or slough with a variety of herbaceous emergent, floating, and submergent vegetation. Spring vegetation most commonly associated with the spotted frog on the Wasatch Front includes: bullrush (*Scirpus* sp.), sedges (*Carex* spp.), cattails (*Typha* sp.), duckweed (*lemnaceae*), rushes (*Juncus* spp.), watercress (*Nasturtium officinale*), grasses (*Graminae*), and algae (Ross et al. 1994). Morris and Tanner (1969) suggest that deep silt or muck bottoms are required for hibernation and torpor.

Spotted frogs emerge from hibernation in the spring and tend to use different habitats depending on their needs. For example, in Yellowstone National Park sexually immature individuals tended to inhabit aquatic habitats away from breeding adults (Turner 1958). Breeding adults may use areas in the absence of other age-classes, and move to sites near younger frogs as the water begins receding from the breeding area (Turner 1958). Turner (1960) suggested that spotted frogs have small home ranges. In Yellowstone National Park frogs were recaptured at or near the same location used for breeding. This hypothesis is supported by studies of spotted frogs in the Heber Valley where most individuals were recaptured in the site of their initial capture (Ammon and Wilson 2001).

Recent studies have evaluated spotted frog locations and movements outside of the breeding season. Ongoing research in the Heber Valley of Utah indicates that spotted frogs travel short distances between breeding and post-breeding habitats, and many breeding sites serve as year-round habitat (Ammon and Wilson 2001). Bull and Hayes (2001) noted post-breeding dispersal distances of 15 to 560 meters (49 to 1,837 feet) in spotted frogs in northeastern Oregon. Dispersal patterns were related to pond size, water temperatures, and proximity to other sources of permanent water. Dispersal corridors are typically limited to aquatic or semi-aquatic habitats such as streams, intermittent drainages, and seeps (Ross and Peterson 1998). Intensive mark-recapture and radiotelemetry studies are needed to determine actual movement distances and patterns in this and other Utah populations.

Wasatch Front populations begin breeding in early-March with the spring thaw. However, populations at higher elevations may delay breeding until mid-March, and continue through late-April (UDWR data on file). Elevation differences in spotted frog breeding seasons have been similarly reported in British Columbia (Licht 1975) and Yellowstone National Park (Turner 1958), and are attributed to temperature differences. Spotted frogs are known to use temporary bodies of water for breeding in more mesic parts of their range (Turner 1960, Licht 1971), but in Utah breeding sites are predominantly associated with a spring or some other permanent water source (Morris and Tanner 1969, Hovingh 1993, Ross et al. 1993, Ross et al. 1994).

Egg deposition is stimulated by a single pair of frogs followed by other spotted frogs depositing eggs in the same area. It has been reported that they will deposit eggs in the same area annually (Morris and Tanner 1969, Nussbaum et al. 1983). Individual females may oviposit more than one clutch of eggs annually (Morris and Tanner 1969); however, this has not been confirmed in Utah populations. Sex ratios have not been quantified in Utah. For estimates of effective population size (N_e), UDWR used estimates of 1:1 sex ratios as derived from egg mass monitoring information during 1991–1993 surveys (Ross et al. 1993, 1994).

Egg masses tend to be deposited in open, shallow (<20 centimeters/7.9 inches) areas within 2 meters (6.6 feet) of the shoreline with water temperatures ranging between 11°C and 20°C (51°F and 68°F) (Ross et al. 1993, 1994). Egg masses are weakly adhesive and form an irregular mass or globular cluster approximately 7.5 to 20 centimeters (3 to 8 inches) in diameter. They may become weakly attached to vegetation (*Chara* spp.) for a short period of time. Eventually the mass floats to the surface, exposing the top layer of eggs. Wind and water currents often move masses around and they may begin to break up. Eventually the egg masses may become separated and covered with debris. Number of eggs per egg mass are quite variable, ranging from 147 to 1,160 eggs (Toone 1991). Individual eggs are typically larger than those of other ranids. Hatching rates vary directly with water temperature (Toone 1991).

Studies in Montana, Oregon, and British Columbia have documented that insects are the primary prey for the spotted frog (Miller 1978, Whitaker *et al.* 1982, Licht 1986). These studies were performed in portions of the species range outside of Utah where spotted frogs inhabit different habitat types and may exhibit different life history characteristics. However, absent site-specific information, we can assume that the feeding habits of spotted frogs in Utah are similar to those documented in other areas.

Summary of Factors Affecting the Species

Section 4 of the Act and implementing regulations (50 CFR part 424) set forth the procedures for adding

species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act. An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one which is likely to become and endangered species within the foreseeable future throughout all or a significant portion of its range. The five factors used in determining whether a species warrants listing as either threatened or endangered and their application to the Wasatch Front Columbia spotted frog (*Rana luteiventris*) are as follows:

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

Urban growth with its associated water development and consequent losses of wetland and spring habitats were the primary causes for historical population losses and habitat fragmentation for the spotted frog on the Wasatch Front. Continued urbanization has been identified as a potential cause of concern for the spotted frog based on growth projections. The Wasatch Front human population is projected to increase to almost 3 million people by 2020 and 5 million by 2050 (Lee 2001). Counties with extant populations of spotted frogs are experiencing high human population growth rates (Table 1).

Approximately 14,400 hectares (35,500 acres) of wetland habitats are at direct risk from urban expansion by 2050 (Lee 2001, Lee and Melcher 2001). Development is projected to occur near most extant spotted frog populations by 2050. Urban development is not projected to occur in the vicinity of the Jordanelle/Francis population; however, recreational and rural residential development is increasing in the area and will likely continue. However, in and of themselves, general predictions about the degree of urbanization and other land uses in 2050 are too distant in time and speculative in nature to support a finding that the spotted frog is likely to be in danger of extinction in the foreseeable future. Though three of the populations once faced more certain and immediate threats to their habitat, as discussed below, those threats have been sufficiently addressed by conservation actions currently in place.

TABLE 1.—PROJECTED ANNUAL GROWTH RATES OF THE HUMAN POPULATION IN COUNTIES WITH EXTANT POPULATIONS OF SPOTTED FROG

County	Growth rate (%)
Utah	3.8
Wasatch	4.2
Summit	6.7
Juab	4.2
Sanpete	3.9

Note: Growth rates taken from Lee 2001 except for Summit County which was obtained from the web site, URL: *http://utahreach.usu.edu/summit/visitor/about.html.*

Recent conservation and management efforts (Table 2) have successfully focused on addressing foreseeable habitat loss threats to an extent that alleviates the threat of urbanization at the extant populations. Water development was identified as negatively impacting spotted frog habitat in the Heber Valley. However, this threat was removed with the purchase of 125 cubic feet per second of riverine base flows and 650 acre-feet of water for restored habitats under the Provo River Restoration Project. A potential threat to the Mona/Burraston population of spotted frogs is groundwater withdrawals in the Juab Valley. Thiros (1999) estimated, using 1992 water withdrawal rates and assuming no additional water contributions to the system, the water table could be lowered by 1.5 m (5 ft) and groundwater discharge rates reduced by 38 percent by 2022. However, model predictions indicate that the groundwater level available to support wetland vegetation will not significantly decrease in the Mona/Burraston area (Thiros 1999) and habitat for this population of spotted frogs is not likely to be affected. Groundwater levels are currently sufficient to sustain the Mona/Burraston spotted frog population. Habitat acquisitions or easements have been completed to a large degree at three of the extant populations (Mona/Burraston, Heber Valley, Springville Hatchery) to protect the populations in perpetuity. For example, 85 percent of the Provo River corridor in the Heber Valley (including most occupied spotted frog habitat) has been purchased through conservation efforts and is protected in perpetuity through legally binding agreements. Because of this protection, urbanization is no longer a direct threat to these populations. Although the threats to the habitat of other populations are distant and speculative at this time, as discussed below in ''Recommendations for the Future,'' similar protection efforts are planned for those populations.

Due in large part to habitat protection and conservation activities put in place during the past 5 years, the long-term viability of the Columbia spotted frog population on the Wasatch Front is stable to increasing. Recent survey efforts have discovered new breeding sites over larger areas, and documented larger population sizes than were previously known. The extant populations are more extensive, more connected and, therefore, more viable than previously thought.

Although habitat acquisitions that are completed are sufficient to address the current threats to the Wasatch Front population of spotted frog, efforts continue for acquiring additional habitats. Habitat acquisitions, to date, were targeted in those populations where threats were the most imminent. Potential threats are minimal at the remaining unprotected populations and do not currently compromise the long-term persistence of the spotted frog.

Given the habitat protection already in place, habitat loss is not likely to put the frog in danger of extinction in the foreseeable future. This is so even if none of the additional planned habitat protection is completed. To the extent that the additional protection is completed, it should further improve the status of spotted frog.

TABLE 2.—HABITAT PROTECTION AT EXTANT SPOTTED FROG POPULATIONS

Subunit or population	Habitat quantity	Acquisition or easement	Habitat type	Purchase status
Springville Hatchery	22.3 ha (55 ac)	Acquisition (State fish hatchery).	Occupied spring complex	Completed
Mona/Burraston	34.6 ha (85.5 ac)	Acquisition	Occupied spring complex	Completed
Mona/Burraston	7.9 ha (19.5 ac)	Acquisition or Easement	Occupied spring complex	Ongoing
Heber Valley	251 ha (620 ac)	Acquisition	Occupied riparian wetlands	Completed
Heber Valley	198 ha (490 ac)	Acquisition	Occupied riparian wetlands	Ongoing

TABLE 2.—HABITAT PROTECTION AT EXTANT SPOTTED FROG POPULATIONS—Continued

Subunit or population	Habitat quantity	Acquisition or easement	Habitat type	Purchase status
Heber Valley	650 acre-feet (plus 125 cfs base flows).	Acquisition	Stream flows to occupied riparian wetlands.	Completed
Jordanelle/Francis	9.7 km (6 mi), 6.5 ha (16 ac)	Easement	Occupied riparian wetlands	Ongoing
Fairview	162 ha (400 ac)	Easement	Occupied spring complex	Ongoing
Utah Lake	5,544 ha (13,700 ac) (includes previously acquired lands).	Acquisition	Unoccupied spring complexes	Completed
Weber River	3.2 km (2 mi)	Acquisition	Unoccupied riparian wetlands	Completed

*A full list of all actions since 1998 (*e.g.,* habitat enhancements, surveys, conservation easements) is in the appendix of this Status Review.

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

The collection of spotted frogs is currently prohibited (State of Utah Rule R657–3). However, past collections of this species may have contributed to the extirpation of some populations on the Wasatch Front. In particular, spotted frogs were collected from the Provo, Springdell, and Vivian Park areas for universities (U.S. Fish and Wildlife Service 1993).

Past and ongoing studies on the life history and habitat requirements of spotted frog in Heber Valley include the use of radio-tags, PIT-tags, and general handling of individual frogs. However, there have been no documented injuries or mortalities due to research related activities (*e.g.,* handling stress). Although these actions may increase the stress, disease risk, and mortality in this population, these studies are not a significant threat with the operating protocols and procedures to limit potential impacts in place.

C. Disease or Predation

Predation by introduced species is a potential threat to the Wasatch Front spotted frog. Most spotted frog habitats in Utah were not historically inhabited by predatory fish species (Sigler and Miller 1963). Today, a variety of introduced fishes, including largemouth bass, rainbow trout, brown trout, brook trout, common carp, mosquitofish, and rainwater killifish have become established in spotted frog habitats on the Wasatch Front. The potential threat appears highest from mosquitofish due to its affinity for the same systems as the spotted frog.

The mosquitofish (*Gambusia affinis*) is a small fish native to the eastern and southeastern United States. This species has been stocked throughout the world as a means of biological control for mosquitos (Sigler and Sigler 1996). Mosquito abatement districts have extensively stocked mosquitofish throughout various aquatic habitats in Utah including wetlands that have current or historic populations of spotted frog. Mosquitofish may be illegally transferred to new habitats by the general public or inadvertently transferred during relocation and reintroduction efforts for other aquatic species. Once introduced, mosquitofish can migrate to adjacent habitats.

Mosquitofish pose a potential threat to spotted frogs because of their known aggressive predation on eggs and young of fishes and amphibians (Grubb 1972, Sigler and Sigler 1987). Mosquitofish are suspected to prey preferentially on amphibian larvae in the presence of other potential prey items (Goodsell and Kats 1999). Spotted frogs may be particularly susceptible to predation by mosquitofish because the frogs emerge from the egg at a very small size of 8–10 millimeters (Morris and Tanner 1969). Studies of the California red-legged frog (*Rana aurora draytonii*) showed that tadpoles of all sizes may be susceptible to mosquitofish predation; they found that mosquitofish were effective predators on tadpoles and could injure or kill tadpoles larger than themselves (Courtenay and Meffe 1989). Spotted frog larvae are unable to swim for a few days after hatching, thus inhibiting their ability to actively avoid predation (Morris and Tanner 1969). Mosquitofish have been observed preying on recently emerged spotted frog tadpoles in populations on the Wasatch Front (Ross *et al.* 1993; Chris Keleher, CUWCD, pers. comm.).

Raccoons expanded their range into Utah over the past 25 years (Wilson and Balcomb 2001). Raccoon predation has been documented in the Heber Valley (K. Wilson, UDWR, pers. comm.). Although they are amphibian predators, the level of threat to the Wasatch Front spotted frog has not been determined. Bullfrogs, another nonnative predator, also are expanding their range into the Wasatch Front, but have not been documented in any spotted frog populations.

To date, no spotted frog extirpations have been attributed to the presence of nonnative species. Population-level effects (*i.e.*, population declines due to predation) by mosquitofish, and other predators, have not been observed on the Wasatch Front (K. Wilson pers. comm.). Available information suggests that spotted frogs are persisting with the presence of nonnative species. Based on numbers of breeding sites and egg masses, extant spotted frog populations are stable to increasing.

Habitat protection and research efforts are continuing to explore control methodologies in the event that nonnative species could ultimately affect spotted frog populations. For example, newly created and restored habitats at Heber Valley and Jordanelle/Francis are being designed to prevent nonnative species invasions. Ongoing conservation actions at all occupied habitats include assessing the impacts of nonnative species on the spotted frog and active removal in some cases. For example, a mechanical removal effort targeting nonnative fish species (primarily mosquitofish) has been underway since 1999. Long-term reduction of mosquitofish was not achieved; however, the documented temporary reduction has important implications toward substantially reducing mosquitofish numbers during critical life-stages of spotted frog (recently emerged tadpoles) and allowing better recruitment of spotted frog to adult life-stages (UDWR, unpubl.data). Given the known level of impact and the above-described conservation actions and protocols, predation by nonnative species does not threaten the persistence of Wasatch Front spotted frog populations.

Disease

Chytrid fungus was recently discovered in the Heber Valley population of the spotted frog (Green and Converse 2002, Green and Sohn 2002). Chytrid fungus has been implicated in precipitous declines of amphibian species worldwide (Berger *et al.* 1998, Longcore *et al.* 1999, Fellers *et al.* 2001, NWHC 2001). However, its role in the larger picture of frog population

dynamics, and more importantly, its implications for the spotted frog remains undefined. In fact, questions remain regarding the actual infection rate of chytrid in wild populations (Sredl 2000). Some researchers now speculate that the distribution and infection rate of chytrid may reflect more the extent to which biologists have tested for it as much as it reflects the actual distribution of infection (Fellers *et al.* 2001). Chytrid fungus may naturally occur in many amphibian populations that are only affected when other stressors or environmental factors interact synergistically to increase the virulence of the disease or compromise amphibian immune systems (Carey *et al.* 1999, Lips 1999). Some frog populations are known to have coexisted with chytrid fungus for decades (USFWS 2002).

Some researchers speculate that the spotted frog may exhibit a resistance (David Green pers. comm. 2002) or adapt (Green and Converse 2002, Green and Sohn 2002) to chytrid infection. Evidence suggests that amphibians infected with chytrid frequently die of dehydration because alteration of the skin inhibits their ability to absorb water. This is especially true in toads which, as opposed to frogs, have a limited area of skin over which to uptake water (*i.e.*, the pelvic patch); chytrid die-offs have been seen much less frequently in more aquatic amphibians, such as salamanders. Researchers hypothesize that frogs avoid death by dehydration from chytrid infection because they more freely exchange water though skin over a large portion of their body. In this sense, spotted frogs, because they are highly aquatic in nature, may exhibit a similar ''resistance'' to chytrid infection (David Green pers. comm. 2002). The infected Heber Valley frogs exhibited a limited infection with chytrid present only on the toes; these individuals appeared to control and adapt to their chytrid infections (Green and Converse 2002, Green and Sohn 2002). The chytrid researchers believe that low-stress conditions in the laboratory may have allowed these spotted frogs to persist long after infection was detected.

The Heber Valley population is the largest and most protected spotted frog population on the Wasatch Front. Habitat protection and conservation efforts have minimized or removed potential threats such as urbanization, predation, and water depletion as stressors from this population. Based on available information, the Heber Valley frogs are less likely to incur large-scale die-offs and are more likely to coexist with chytrid fungus in this low-stress environment. To prevent the potential for further spread of chytrid and other potential disease risks for spotted frogs, the UDWR has implemented strict disease protocols for managers and researchers working with spotted frog and other aquatic species in Utah. Implementation of these procedures is expected to greatly decrease the potential for chytrid to spread to other spotted frog populations. However, all Wasatch Front spotted frog populations will be closely monitored to identify any potential effects of chytrid.

Our current understanding and the relatively low level of known infection of chytrid fungus provides a measure of assurance that the current infection will not put the spotted frog in danger of extinction. To ensure the accuracy of this analysis, efforts will be made to continue to document and control the spread of chytrid fungus.

D. The Inadequacy of Existing Regulatory Mechanisms

Regulatory mechanisms did not halt the historical decline of the spotted frog along the Wasatch Front. However, historically, this was largely due to a lack of knowledge regarding the declining status of the spotted frog. Beginning in the mid-1990s, conservation of the spotted frog became a focus of many State and Federal agency efforts, resulting with implementation of the interagency Conservation Agreement and long-term protection for extant spotted frog populations. Importantly, the extant populations are now largely protected from imminent threats and there are ongoing conservation actions aimed at providing long-term protection for unoccupied habitats.

Existing regulatory mechanisms that also may provide protection for spotted frogs and their habitats include—(1) State laws, (2) National Environmental Policy Act, and (3) section 404 of the Clean Water Act. These laws provide additional protection and awareness above and beyond completed and ongoing conservation efforts.

State Regulations

The spotted frog is currently designated as a sensitive species in the State of Utah and is managed under a Conservation Agreement. State of Utah Rule 657–3 regulates the collection, importation, and possession of spotted frogs. The State of Utah Fish Stocking and Transfer Procedures (Policy # W2ADM–1) protects the spotted frog and other sensitive species in Utah by preventing the stocking of nonnative and other potentially harmful species in spotted frog habitats, and outlining protocols to decrease potential transmission of harmful pathogens to spotted frog populations.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires Federal agencies to describe a proposed action, consider alternatives, identify, and disclose potential environmental impacts of each alternative, and involve the public in the decision-making process. Federal agencies are not required to select the alternative having the least significant environmental impacts, but environmental impacts, including those to wetlands and wildlife, are included as part of the public review process and NEPA analysis.

The NEPA can be an effective mechanism in the conservation of the spotted frog where a Federal nexus exists, and agencies are actively involved in spotted frog conservation; *i.e.*, the Conservation Agreement provides a mechanism for coordination and awareness in this regard. Land use and activities on private lands which includes more than half of the spotted frog populations are not required to comply with NEPA. Many large-scale land activities and water development projects occurred before there was a local awareness about the historically declining status of the spotted frog. However, most Federal agencies with interest or planned actions that might affect spotted frog are currently signatories to the Conservation Agreement. Although their involvement in and of itself does not legally bind the signatories to specific actions under NEPA, since the inception of the agreement these agencies have included spotted frog impacts and conservation as part of NEPA compliance.

Clean Water Act Section 404

Section 404 of the Clean Water Act, administered by the Environmental Protection Agency and the Army Corps of Engineers, is the primary Federal law that potentially provides protection for the spotted frog by regulating fill to wetlands and other aquatic habitats determined to be ''jurisdictional,'' in part through proximity to surface water connections. The types of wetland impacts addressed by section 404 include:

(1) Actions that impact jurisdictional wetlands defined as ''waters of the United States,'' 33 U.S.C. § 1363(7);

(2) Discharge of dredged or fill material into waters of the United States; and

(3) Limited activities in upland habitats that may have indirect impacts

to adjacent wetlands where fill is permitted.

Recent court decisions (*National Mining Association* v. *U.S. Army Corps of Engineers* 145 F.3d-1399 (D.C. Cir. 1998) (overturning the Tulloch Rule); *Solid Waste Agency of Northern Cook County* v. *United States Army Corps of Engineers* 531 U.S. 159 (2001) (narrowing the definition of waters of the United States)) have recently reduced the authority of section 404 to protect wetland habitats.

Because of their hydrologic connection to navigable waterways (*e.g.*, Provo River, San Pitch River), the Corps still regulates the remaining unprotected remnant spotted frog wetland areas and large areas of unoccupied habitats. The Service maintains an important advisory role to the Corps in the section 404 permitting process. Because of questions concerning the success of spotted frog translocations and spotted frog habitat creation, recent discussions with the Corps have focused on using habitat protection (acquisitions, easements) and restoration techniques for mitigation of spotted frog habitats where necessary.

Resource agencies have been successful at incorporating actions and project conditions that protect and enhance spotted frog habitat. Ongoing efforts include the protection and restoration of spotted frog habitat along the upper Provo River associated with the proposed Victory Ranch development and planned acquisitions of other properties along the Upper Provo River. In addition, ongoing negotiations have been successful in relocating a proposed wastewater treatment plant in the San Pitch Valley near Fairview to a location outside of spotted frog habitat. Furthermore, the applicant is proposing to donate approximately 1.6 hectares (4 acres) of mixed uplands and wetlands for a conservation easement for spotted frogs as a part of the project.

Some areas of unoccupied habitats may be considered nonjurisdictional, *i.e.*, not subject to regulations under section 404. However, a large portion of remaining unoccupied habitats are not imminently threatened, and some unoccupied suitable habitats, like those at Utah Lake and the Weber River, are protected in perpetuity. Unoccupied habitats are important for future reintroduction and range expansion efforts now that the extant populations are stable. Although there are no documented records of spotted frogs in these areas, Utah Lake and the Weber River fall within its historic range and provide presumably suitable habitat.

In summary, section 404 certainly does not provide complete protection for the spotted frog and its habitats. Historically, regulatory inadequacies likely resulted in the loss of large amounts of occupied spotted frog habitats. Agencies have more recently been successful in working with local landowners and the 404 permitting process to protect and restore spotted frog populations and habitat. The cooperative environment that has resulted from the Conservation Agreement has facilitated efforts to prioritize the spotted frog through the section 404 permitting process. Because of this emphasis, actions that could affect occupied spotted frog habitats are more thoroughly evaluated and efforts are made to avoid or minimize potential impacts. Therefore, potential regulatory inadequacies do not threaten the long-term persistence of the Wasatch Front spotted frog.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Drought may play a role in reducing reproduction of spotted frogs on the Wasatch Front. Decreased rain and snowfall can dry wetlands, dessicate spotted frog egg masses and larvae, and reduce survival rates of subadults and adults (U.S. Fish and Wildlife Service 2000). The combination of increased water demands and natural drought cycles may further reduce the extent and quality of spotted frog habitat and the size of the remaining populations on the Wasatch Front.

Contaminants have not been specifically implicated in the decline of any spotted frog population on the Wasatch Front. However, given the prevalence of agriculture and urban development, the species is likely exposed to a variety of toxins from urban and agricultural sources. While the sensitivity of this species is largely unknown, studies of similar amphibian species show sublethal and lethal effects at the population level.

These factors are not currently known to be significant threats to the long-term persistence of the Wasatch Front spotted frog.

Conclusions and Findings

Current Status

Currently, there are seven populations of spotted frog included in the Wasatch Front DPS, including the newly discovered Vernon population in the Rush Valley near the town of Vernon. Survey efforts since 1999 have greatly expanded the known range of most populations. Most notably, approximately 19 kilometers (12 miles) of occupied spotted frog habitat were discovered in the upper Provo River corridor. All extant populations, with the exception of the very small, isolated Springville Hatchery/T-Bone Bottom population, have either increased (documented colonization of unoccupied newly created or restored sites) or have been found to be of a larger population size (additional occupied sites or greater density of sites found within known population boundaries) than previously thought (Table 3).

TABLE 3.—NUMBERS OF DOCUMENTED BREEDING SITES IN SPOTTED FROG POPULATIONS ON THE WASATCH FRONT

Population	Year								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Jordanelle/Francis	14	14	14	14	14	23	23	33	48
Heber Valley	22	23	33	52	56	57	74	74	91
Springville Hatchery/T-Bone Bottom	3	3	3	3	3	3	3	3	3
Burraston Ponds/Mona Springs Complex	4	4	4	4	4	7	7	7	7
Holladay Springs	2	2	2	2	2	4	4	4	4
Fairview	11	11	11	11	11	13	26	26	26
Vernon	.....	.....	.....	.....	.....	.....	.....	.....	1

The Springville/T-Bone Bottom remains the most vulnerable to extirpation. All other populations (Heber Valley, Jordanelle/Francis, Mona/Burraston, Holladay, and Fairview) have exhibited stable or increasing egg-mass trends based on a review of almost 10 years of egg-mass number data. Populations, however, are

cyclic and exhibit continuous, natural high/low fluctuations. Population declines are not unusual; amphibian populations are naturally dynamic, and exhibit sporadic breeding in response to environmental stressors (Duellmann and Trueb 1986).

Population fluctuations (as evidenced by egg mass numbers) have occurred, but have been attributed to natural population dynamics resulting largely from climatic conditions, and not the result of changed landscape conditions. In addition, the Vernon population was discovered in 2002. This discovery and that of an additional 19 kilometers (12 miles) of occupied habitat along the Provo River (Jordanelle/Francis population) implies that additional populations and occupied habitat could yet be discovered.

Based on this recent data, extant populations of the Wasatch Front spotted frog DPS, after decades of decline, have been exhibiting a stable to increasing trend in the most recent time period examined (from 1998 to present; Table 4, Table 5).

TABLE 4.—NUMBERS OF EGG MASSES AT DOCUMENTED BREEDING SITES IN SPOTTED FROG POPULATIONS ON THE WASATCH FRONT

Population	Year								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Jordanelle/Francis	92	79	29	21	21	20 (63)	59 (99)	31 (165)	44 (260)
Heber Valley	120	156 (167)	323 (473)	219 (491)	176 (372)	206 (438)	151 (431)	123 (418)	206 (550)
Springville Hatchery/T-Bone Bottom	7	6	0	65	87	44	50	25	9
Burraston Ponds/Mona Springs Complex	5	66	63	148	78	61(78)	111P (120)	69 (73)	41 (41)
Holladay Springs	24	33	29	64	122	144 (192)	135 (160)	52 (68)	27 (27)
Fairview	35	34	24	24	22	17 (25)	59 (130)	20 (163)	*8 (86)
Vernon	.....	.....	.....	.....	.....	.....	.....	.....	4

(#) = egg masses at original breeding site + egg masses at recently discovered breeding sites.
* Three of 11 sites were not surveyed because access was mistakenly denied to the property. This situation has been corrected and full access to these sites has been restored.

TABLE 5.—SUMMARY OF SPOTTED FROG POPULATION TRENDS

Time period	Number of populations	Population stability/size
Pre-settlement	>18 [a]	No data.
Early to Mid 1900s	18 [a]	Presumed decreasing.
Up to 1993	9	Documented decreased.
1995 to 1998	6	Stable.
1998 to 2002	7 [b]	Stable to increasing.

[a] Includes documented historic and current populations. Current populations are assumed to have been present historically.
[b] Includes recently discovered Vernon population.

The recent change in species status and trends is due in part to our increased knowledge of the species distribution and in part due to the success of already-completed conservation efforts that have minimized or reduced many of the imminent threats to extant populations. Although not all actions necessary to alleviate concerns have been completed, completed conservation actions have addressed and removed or sufficiently reduced threats and the risk of extinction.

The development and implementation of the Conservation Agreement represented an important shift in awareness and effort for conservation of the Wasatch Front spotted frog. Since the initiation of the Conservation Agreement in 1997–1998 and the subsequent conservation actions, monitoring and survey data has shown that populations are larger than previously thought.

Conservation actions have been successful at addressing localized threats to the species at the extant population areas. For example, habitat protection and removal of grazing at Mona Springs has resulted in significant improvements to spotted frog habitat. Habitat acquisitions specific for existing spotted frog populations have occurred (*e.g.*, Heber Valley and Mona/Burraston) and significant acreages of unoccupied historic habitat have been purchased and protected (*e.g.*, Utah Lake Wetland Preserve) as mitigation for prior impacts to aquatic resources associated with the Central Utah Project. Funds also have been allocated for research into the life history, habitat requirements, and genetics of the spotted frog.

Specific conservation actions and large-scale land acquisitions have occurred that may provide reintroduction areas for spotted frog range expansion efforts. For example, acquisition of the Utah Lake Wetland Preserve and parcels in the Weber River drainage to provide historical, but currently unoccupied habitats.

Population Viability

Of the extant populations, there is a range of ecological size and function that provides a level of diversity. Some populations occur along riparian wetland corridors while others occupy complex spring systems in the valley floor. Although populations are undoubtedly smaller than they were historically, most exhibit stable or increasing trends. The Heber Valley, Jordanelle/Francis, Fairview, and

possibly the Mona/Burraston population are large enough to provide some small scale metapopulation function (genetic and demographic buffer) within individual population boundaries. Although not discrete populations, these locations occur over a geographic area of sufficient size and habitat diversity to yield localized genetic interchange. These sub-population dynamics provide local genetic and demographic buffer for the overall population. Other populations like the Springville and Holladay populations, provide small, isolated genetic and demographic refuge and a locally unique ecological function to the Wasatch Front DPS.

There is no specific answer in conservation literature as to the number of populations necessary to allow long-term persistence of a species in a natural evolutionary trajectory. For amphibians, most experts agree metapopulation dynamics provide a critical role in population stability. In the absence of large, connected metapopulations, multiple spotted frog populations of different sizes that represent a range of natural ecological function can provide a reasonable level of assurance for long-term persistence of the species. Newly created or isolated small populations can provide demographic and genetic refuge for other populations. Larger, better connected populations can prevent loss of genetic diversity and prevent detrimental genetic affects that can occur in small populations.

The number of extant populations is one factor affecting the viability of a species. The greater number of populations that occur, the less likely the species will go extinct. This also can be misleading. One large metapopulation fragmented into two smaller populations by human impacts does not translate into a greater chance of persistence. Other factors, such as population size (relative density, abundance, or effective size) and stability (protection of habitat, stable or increasing trend in monitoring data) must be considered in concert with number of populations. When there is a positive or stable trend in population size and numbers and a reduction in threats due to completed and ongoing conservation actions, the species is likely to persist into the future.

Summary

The overall level of threats to the long-term persistence of the Wasatch Front spotted frog has decreased in recent years, particularly since 1998. Although most of the human activities that contributed to these threats still occur to some extent throughout the Wasatch Front, there is no longer the same level of impacts on the spotted frog that resulted in past wide-spread habitat destruction and the loss of spotted frog populations. Much of the occupied habitat for the spotted frog is under State or Federal ownership and ongoing management of these lands emphasizes the long-term persistence of the spotted frog. This is not to say that threats have been eliminated. Localized areas continue to be affected by specific problem activities.

However, mechanisms are in place through Federal, State, and local conservation and land-use plans to identify these activities, correct the problems, and protect spotted frog populations. To date, these actions have been successful at reducing threats to extant populations, largely by acquiring important habitats and implementing management actions that improve habitat conditions. Success is evidenced by the stable to improving status of the spotted frog throughout the Wasatch Front in the most recent time period evaluated.

Based on this analysis of the effects of conservation actions already in place, the trajectory of the Wasatch Front spotted frog status continues to be towards more secure populations, reduced threats, and improved habitat conditions. Although some threats continue and may increase, most threats have been or are being addressed through completed or ongoing actions and at this time do not threaten the long-term persistence of the spotted frog. Our analysis of the five factors under section 4(a)(1), individually and collectively, indicates that the spotted frog is not in danger of extinction or likely to become in danger of extinction in the foreseeable future throughout all or a significant portion of the Wasatch Front. Therefore, the Service finds that the Wasatch Front spotted frog is ''not warranted'' for listing under the Act. If new information indicating that the level of threats have become more severe or the status of the spotted frog or its habitat degenerates in the future, the status of the spotted frog will be reevaluated.

Recommendations for the Future

Following historical habitat and population losses, the current populations are stable to improving and most are protected to a large degree from ongoing direct habitat loss, due to already completed conservation actions. Further habitat acquisitions and protections are in progress for the Jordanelle/Francis, Heber Valley, Mona/Burraston, and Fairview populations. Current ventures are focused on acquiring habitat easements along approximately 9.7 kilometers (6 miles) above Jordanelle Dam, including occupied and suitable spotted frog habitats. Easements are currently being pursued with 7 Fairview landowners to protect approximately 162 hectares (400 acres) of occupied spotted frog habitat and migration corridors from potential water and residential development. The remaining 15 percent of the Provo River corridor in the Heber Valley is projected to be purchased and protected by 2004. In the Mona/Burraston population, fee-title purchase or conservation easements are currently being negotiated for 7.9 hectares (19.5 acres) which would allow for protection of all spring and potential spotted frog habitat on this site.

Completion of habitat protection activities which have resulted in a reduction of threats to the extant populations allows conservation efforts to now focus on population expansion into historic, unoccupied habitats. Habitat protection and reintroduction of frogs into suitable, unoccupied habitats will further improve the long-term status of the species along the Wasatch Front. For example, recent habitat acquisitions that also will benefit the spotted frog include 5,544 hectares (13,700 acres) at Utah Lake and 3.2 kilometers (2 miles) along the upper Weber River.

Therefore, the focus of spotted frog conservation efforts can reasonably shift to acquisition of additional occupied and unoccupied, suitable habitats and range expansion efforts, including:

(1) Land protection mechanisms, such as conservation easements and fee-title acquisitions generally provide the most long-term benefits for sensitive species. Voluntary conservation actions on parcels of private land may provide site-specific benefits to the frog. Future conservation should continue to focus on land acquisition and easements that include buffer zones sufficient to minimize direct and indirect impacts from land use as well as protection and maintenance of dispersal or migration corridors. Furthermore, steps should be taken to protect water sources (*i.e.*, Juab Valley) where potential threats are identified.

(2) Although there is no specific number of populations necessary to prevent extinction, reintroduced populations provide ecological redundancy in ecological function and genetic and demographic stochasticity. There are several habitats already identified which may provide suitable reintroduction sites. Future conservation should include reestablishment of spotted frog populations, and associated research

and land management necessary to maintain new populations in: (1) Areas where populations previously occurred if suitable habitat remains and (2) other suitable habitat within the natural range of the species.

(3) Some Wasatch Front spotted frog populations are notably small in size and vulnerable to risks of detrimental genetic processes (inbreeding, loss of genetic diversity) and demographic uncertainty. Springville Hatchery/T-Bone Bottom population is particularly vulnerable based on its current size and decreasing trend. Actions should be taken to augment or through some other process, increase the size of this population. Furthermore, the current trend should be evaluated to determine if specific land or water use activities are exacerbating the decrease. If specific threats are identified, priority should be placed on reducing these threats such that the population would remain secure into the future.

References Cited

A complete list of all references cited is available upon request from the Utah Field Office (see **ADDRESSES** above).

Author

The primary authors of this document are Jessica Gourley and Laura Romin (see **ADDRESSES** above).

Authority

The authority for this action is section 4(f) of the Endangered Species Act, 16 U.S.C. 1533(f).

Dated: August 23, 2002.

Steve Williams,

Director.

[FR Doc. 02–22160 Filed 8–29–02; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 010501108–2202–02, I.D. 040502B]

Endangered and Threatened Species; Final Determination on a Petition to Designate Critical Habitat for the Bering Sea Stock of Bowhead Whales

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of determination.

SUMMARY: NMFS received a petition on February 22, 2000, requesting that portions of the U.S. Beaufort and Chukchi Seas be designated as critical habitat for the Western Arctic stock (which is also referred to as the Bering-Chukchi-Beaufort stock, among other names) of bowhead whales, *Balaena mysticetus*, under the Endangered Species Act (ESA). Under the ESA, the designation of critical habitat for species listed prior to 1978 is discretionary. NMFS is not proposing designation of critical habitat for this population of bowhead whales for the following reasons: (1) the decline and reason for listing the species was overexploitation by commercial whaling, and habitat issues were not a factor in the decline; (2) there is no indication that habitat degradation is having any negative impact on the increasing population in the present; (3) the population is abundant and increasing; and (4) existing laws and practices adequately protect the species and its habitat.

ADDRESSES: Requests for copies of this determination should be addressed to the Chief, Marine Mammal Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Bradley Smith, Alaska Regional Office, NMFS, Anchorage, Alaska, (907) 271–5006; Michael Payne, Alaska Regional Office, NMFS, Juneau, AK, (907) 586–7236, or Thomas Eagle, Office of Protected Resources, NMFS, Silver Spring, MD, (301) 713–2322, ext. 105.

SUPPLEMENTARY INFORMATION:

Background

Listing Under the ESA: Bowhead whales were listed as endangered under the Endangered Species Conservation Act, the predecessor to the ESA, on June 2, 1970 (35 FR 8495; codified at 50 CFR 17.11). The species was then listed as endangered under the ESA in 1973. The principal cause of the decline of bowhead whales, which prompted its listing, was commercial whaling. Factors related to habitat have not been identified as a factor in the decline of the species. Critical habitat has not been designated previously for bowhead whales.

Status and Distribution: Five stocks of bowhead whales occur in Arctic and subarctic waters of the northern hemisphere. The Western Arctic stock of bowhead whales is the largest of these stocks, and occurs in the Bering, Chukchi, and Beaufort Seas. This stock was reduced by commercial whaling in the late 19th and early 20th centuries from an estimated original population size of 10,400–23,000 whales to only several thousand whales by 1910. The best available population estimate for this stock is 8,200 animals and is based upon a survey in 1996. The annual rate of population increase is estimated to be 3.2 percent. A comprehensive survey of the Western Arctic stock of bowhead whales was conducted in the spring of 2001 near Barrow, AK. While the analyses from this survey are not yet completed, preliminary information indicates that their abundance has continued to increase.

Bowhead whales are seasonal residents in the Chukchi and Beaufort Seas. The summer habitat for this stock occurs primarily in Canadian waters off the McKenzie River Delta. They migrate from west to east in spring, and return in fall. Most of the stock is believed to winter in the central and western Bering Sea along the ice front and in irregular areas of open water within the ice called polynyas.

Mating is believed to take place in late winter and spring, perhaps continuing through the spring migration. Each year calving occurs as early as March and as late as August; however, most calving occurs from April through early June during the period of migration.

Bowhead whales feed almost exclusively on zooplankton. Bowhead whales feed in summer in the Canadian Beaufort Sea and the Amundsen Gulf area. Foraging also occurs during the fall migration throughout the Alaskan Beaufort Sea. Feeding locations may vary between years. The majority of whales harvested during fall at Barrow, AK, have food in their stomachs. In September 1998 bowhead whales were observed feeding along the Alaskan coastline near and east of Kaktovik. Most bowhead whales harvested at Kaktovik have food in their stomachs. Studies in the eastern Beaufort Sea indicate that whales also forage over the inner continental shelf. Local knowledge has also shown that the waters around the barrier islands along the Beaufort Sea coast are an important foraging area for bowhead whales. Several sources of man-induced activities impact, or may impact, bowhead whale populations. Bowhead whales are harvested by Alaskan Natives in the Beaufort, Bering, and Chukchi Seas. Annual subsistence take levels averaged 37 whales per year from 1990–2000. In addition to the subsistence harvest, other human activities may contribute to the total mortality. Commercial fishing occurs in the Bering Sea and elsewhere throughout the range of this stock. Interactions between bowhead whales and fishing gear is not thought to be common, however, bowhead whales with ropes caught in their baleen or