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**Columbia Spotted Frog**  
**(populations south of the Snake River)**  
*Rana luteiventris*

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Amphibia — Anura — Ranidae

**CONSERVATION STATUS / CLASSIFICATION**

Rangewide: Imperiled/Vulnerable population (G4T2T3)  
Statewide: Imperiled (S2)  
ESA: Candidate  
USFS: Region 1: No status; Region 4: Sensitive  
BLM: Threatened, Endangered, Proposed, and Candidate (Type 1)  
IDFG: Protected nongame

**BASIS FOR INCLUSION**

Candidate under the U.S. Endangered Species Act; restricted populations.

**TAXONOMY**

No subspecies is currently recognized although molecular data suggest regional differentiation exists among Columbia spotted frog populations (Bos and Sites 2001).

**DISTRIBUTION AND ABUNDANCE**

In Idaho the distribution of the Columbia spotted frog extends to the south of the Snake River as a series of small populations centered on the east slopes of the Owyhee Mountains in Owyhee County, with isolated populations in the Bruneau River drainage in Owyhee County and the headwaters of Salmon Falls Creek in Twin Falls County. These populations are included in the Great Basin Distinct Population Segment as recognized by USFWS.

Columbia spotted frog populations in this region typically are small (i.e., <12 frogs have been encountered at most sites). Few sites appear to support more than 50 adults. The largest extant population has varied from about 100–230 adults during the late 1990s and early 2000s (Lingo and Munger 2004).

**POPULATION TREND**

Most monitored populations have exhibited short-term declines in population size. The largest extant population has declined steadily since 1998. Similar declines have been documented at other monitored sites, and frogs were found at only 5 of 11 formerly occupied sites during 2003. Only 1 population is known to have increased during recent years. This population was thought to have been extirpated during the 1990s when breeding habitat was lost and no frog could be located. Habitat rehabilitation efforts were undertaken during 2001, and the site was recolonized.

**HABITAT AND ECOLOGY**

The species is highly aquatic, seldom being found far from water. In southwestern Idaho, wetland habitat occupied by frog populations is generally associated with springs

or small lowland and foothill streams. The largest populations occur in structurally complex wetlands with diverse pool and meadow components. Suitable sites contain shallow breeding pools and deeper–water overwintering sites.

Wet meadows, riparian wetlands, and stream courses are important as dispersal corridors among perennially occupied sites. Considered as independent units, small populations are susceptible to breeding failure and other catastrophic events. Small populations can persist when dispersers from neighboring populations counteract the effects of inbreeding or recolonize extirpated sites.

## **ISSUES**

The loss of wetland and riparian habitats is a pervasive threat. Desert wetland systems are particularly vulnerable to disturbance because anthropogenic uses tend to be focused in aquatic habitats. Agricultural activities, such as water withdrawal, diversion, and livestock use, can contribute to habitat loss and degradation.

Disease is a potentially important, yet little understood threat to population viability. Chytridiomycosis (often abbreviated “chytrid”) is an amphibian disease caused by the fungus *Batrachochytrium dendrobatidis*. This disease has been implicated in the loss of amphibian populations worldwide and may occur within spotted frog populations of this region.

## **RECOMMENDED ACTIONS**

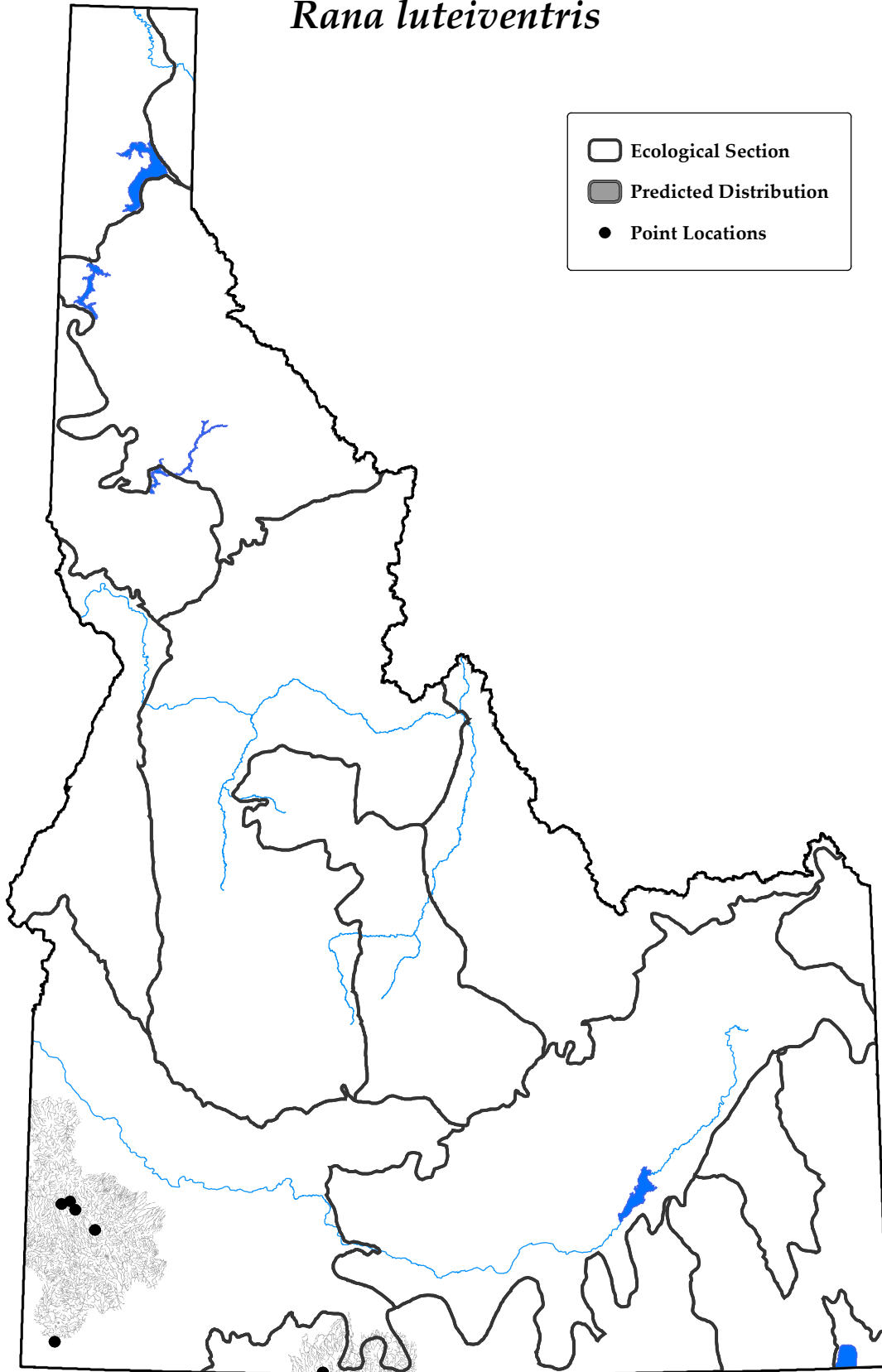
Despite high interest in these populations, a complete understanding of the distribution of frog populations in this area is lacking, particularly in eastern Owyhee County and Twin Falls County where surveys have been largely opportunistic. Comprehensive surveys are needed.

A monitoring program for populations in Owyhee County has been implemented. An important next step will be to evaluate the findings of this program to determine if data are sufficient to indicate the overall status and to detect population trends. Advances in monitoring techniques and analysis may provide a basis for an improved methodology.

A focus of recovery of Columbia spotted frog populations should be the stabilization and rehabilitation of habitat for extant breeding populations. In many areas, habitat improvements may be accomplished through grazing management. Emphasis is needed in stream and riparian restoration to increase available wetland habitat and restore connective corridors among occupied habitats.

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Map created on September 19, 2005  
and prepared by Idaho Conservation Data Center.

Sources: Point data are from Idaho Conservation Data Center,  
Idaho Department of Fish and Game (2005). Predicted distribution  
is from the Wildlife Habitat Relationships Models (WHR),  
A Gap Analysis of Idaho: Final Report. Idaho Cooperative Fish  
and Wildlife Research Unit, Moscow, ID (Scott et al. 2002).  
Predicted distribution is approximate (for more information, go to  
[http://www.wildlife.uidaho.edu/idgap/idgap\\_report.asp](http://www.wildlife.uidaho.edu/idgap/idgap_report.asp)).

