Desert Valvata

Valvata utahensis

Gastropoda — Heterostropha — Valvatidae

CONSERVATION STATUS / CLASSIFICATION

Rangewide:	Critically imperiled (G1)
Statewide:	Critically imperiled (S1)
ESA:	Endangered
USFS:	Region 1: No status; Region 4: No status
BLM:	Threatened, Endangered, Proposed, and Candidate (Type 1)
IDFG:	Not classified

BASIS FOR INCLUSION

Endangered under the U.S. Endangered Species Act.

TAXONOMY

No subspecies are recognized.

DISTRIBUTION AND ABUNDANCE

This aquatic snail once occurred in Utah and Idaho; the only extant populations exist in Idaho. Historically, the Idaho distribution was believed to be restricted to portions of the Snake River between C. J. Strike Reservoir and American Falls Reservoir. During recent surveys, colonies were documented at sites as far upstream as the lower Henry's Fork (Fields 2005). Population densities in occupied habitat have ranged from 8 to 536 individuals per m^2 (Fields 2005, Frest and Johannes 1992, U. S. Bureau of Reclamation 2002).

POPULATION TREND

The area of occupancy and population size within Thousand Springs Preserve declined over 4 years of monitoring (Frest and Johannes 1992). According to Frest (1999), the overall range extent, number of sites, and number of individuals in Idaho has declined.

HABITAT AND ECOLOGY

The desert valvata occurs primarily in well-oxygenated pools adjacent to rapids or in perennial flowing reaches of the Snake River, but it also occurs in several reservoir habitats. It is associated with soft oxygenated mud or fine sand and silt substrates that are typically calcareous. The species is absent from river reaches with high-velocity current or in areas having only gravel or boulder substrates. Food sources include diatoms and plant debris (U. S. Fish and Wildlife Service 1995).

ISSUES

Habitat loss is a prevalent threat to populations. Eutrophication of the Snake River has resulted from agricultural effluence, freshwater aquaculture inputs, and residential and industrial developments. Dams have altered the temperature and flow characteristics of

the river. Introductions of exotic mollusks are also a threat. Alteration of the aquatic habitat has favored introduced mollusk competitors, notably the New Zealand mudsnail.

RECOMMENDED ACTIONS

A recovery plan has been developed for the federally listed snails occurring in the Snake River, which includes this species. Objectives of the plan include protection of the remaining free-flowing mainstem and cold-water spring habitats in occupied reaches of the Snake River, stabilization of water levels, improvement of water quality, augmentation of flows above Milner Dam, and control of exotic species (U. S. Fish and Wildlife Service 1995). U. S. Fish and Wildlife Service has also implemented a monitoring program. Increasing, self-sustaining colonies at monitoring sites over a 5 year period are required for recovery.

A survey that focuses on the mainstem of the Snake River upstream from American Falls Reservoir and the Henry's Fork should be performed to better determine the distribution in this area. A monitoring program to evaluate population trends throughout the known range may be needed.

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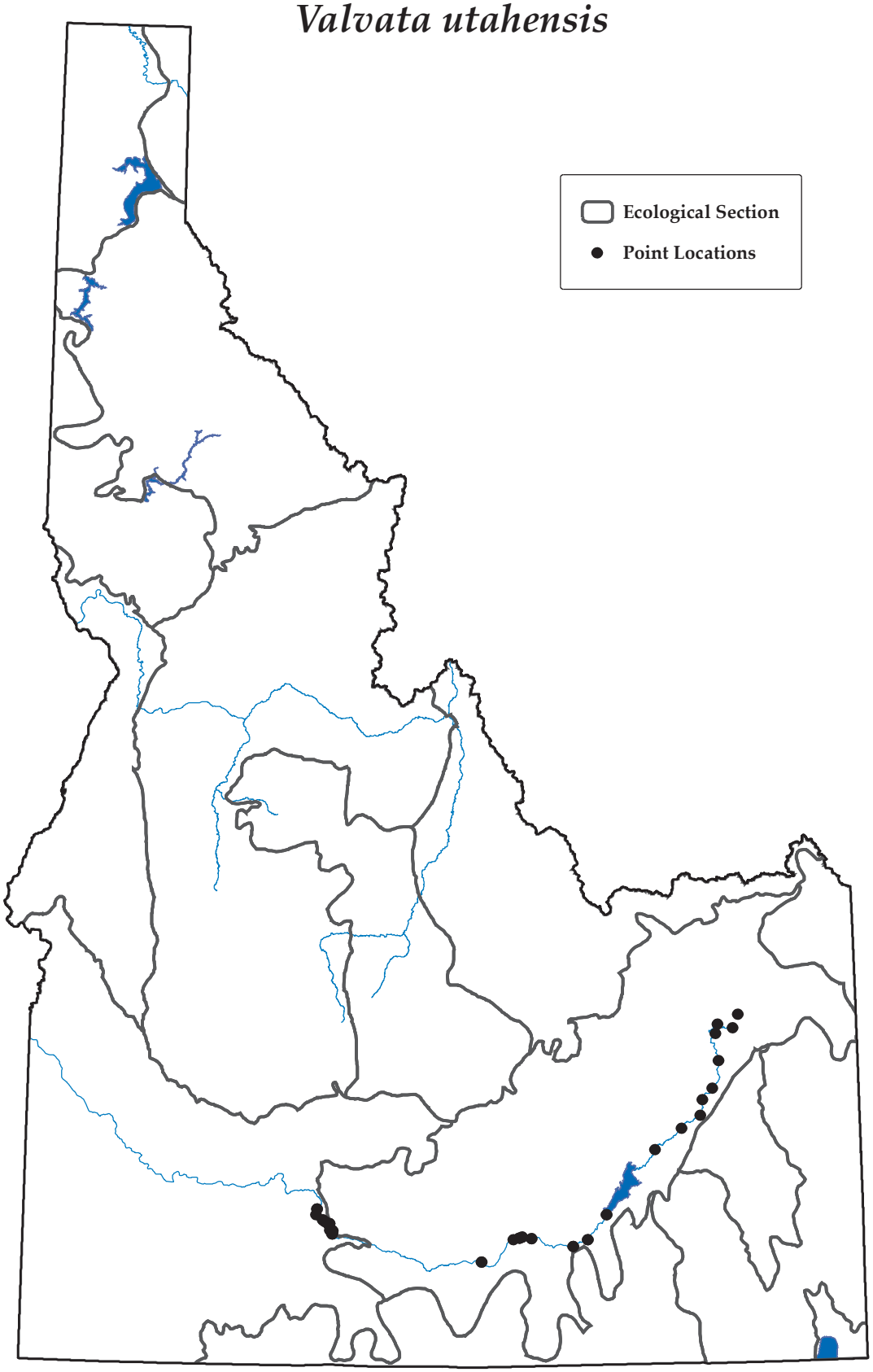

0 20 40 80 Kilometers

0 20 40 80 Miles

12 July 2005
Point data are from Idaho Conservation Data Center,
Idaho Department of Fish and Game.