Ninemile Pyrg (*Pyrgulopsis nonaria*)

Species Status Statement.

Distribution

This species is known from two springs near Ninemile Reservoir in Sanpete County, Utah. In 2017 Liu et al. (2017) suggested that Ninemile pyrg and southern Bonneville pyrg (*Pyrgulopsis transversa*) be synonymized with Bear Lake springsnail (*Pyrgulopsis pilsbryana*) based on a lack of genetic difference between the three species, but additional research on genetics, morphology, and distribution of these three species and the other *Pyrgulopsis* in the region are needed to fully understand whether these three species should be collectively called Bear Lake springsnail.

Table 1. Utah counties currently occupied by this species.

Ninemile Pyrg
SANPETE

Abundance and Trends

The last inventory of Ninemile pyrg happened over 20 years ago, and a quantitative assessment of the species abundance is not available (Hershler 1995). Recent taxonomic research indicates a need for a comprehensive status assessment of *Pyrgulopsis* in north-central Utah.

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Ninemile pyrg occurs in relatively small, mineralized, spring-fed water bodies. Individuals are commonly found on or between aquatic vegetation, bedrock, or pieces of travertine (Hershler 1998). They tend to congregate near the head of springs, where conditions are presumably more stable in comparison to downstream locations (Hershler 1998).

Threats to the Species

The localized distribution of this snail makes the species susceptible to catastrophic natural events, or human actions, that could destroy or degrade the spring habitats where it lives. Small, isolated seeps, springs, or spring complexes are very susceptible to small-scale habitat destruction or modifications that alter the springhead or flow. Potential threats include factors that decrease flow regionally such as prolonged drought or groundwater pumping. There are

also potential local threats to individual springs such as wildfire, nonnative plants and animals, ungulate trampling and grazing, herbicide use, spring outflow alteration, and diversion of spring discharge.

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

Ninemile Pyrg
High
Small Isolated Populations

Rationale for Designation.

Ninemile pyrg occurs in small, isolated spring systems. Direct human pressures, and climate change, presently threaten many springs and spring systems in Utah, and managers and scientists expect these issues to intensify. In order to improve understanding of the distribution and status of this species in Utah, managers need to conduct occasional surveys, and monitor potential threats. Ninemile pgrg is included in the Conservation Agreement for Springsnails in Nevada and Utah (Springsnail Conservation Team 2017).

Economic Impacts of Sensitive Species Designation.

Sensitive species designation is intended to facilitate management of this species, which is required to prevent Endangered Species Act listing and lessen related economic impacts. An ESA listing of Ninemile pyrg would impact management and development of water resources in Sanpete County, Utah. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs.

Literature Cited.

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