



Amphibians

RESOURCE BRIEF

Importance

Amphibians are an important part of aquatic and terrestrial ecosystems. They are prey for many fish, reptile, bird, and mammal species, and they eat a wide variety of invertebrate species. Amphibians serve as indicators of environmental change due to their sensitivity to a variety of factors such as pollution, introduced species, drought, habitat destruction, and disease. Amphibian populations may respond to these factors with measurable changes in site occupancy, distribution, abundance, species richness, or increases in both disease occurrence and malformations. These changes in amphibian populations have cascading effects on other aspects of the ecosystem, such as predator, prey and competitor populations, energy flow and nutrient cycling.

Status and Trends

Surveys by Idaho State University during 2001 and 2002 and by the National Park Service in 2008 provide information on the current status of amphibians in Bighorn Canyon National Recreation Area (NRA). The vast majority of suitable habitat for amphibians is found

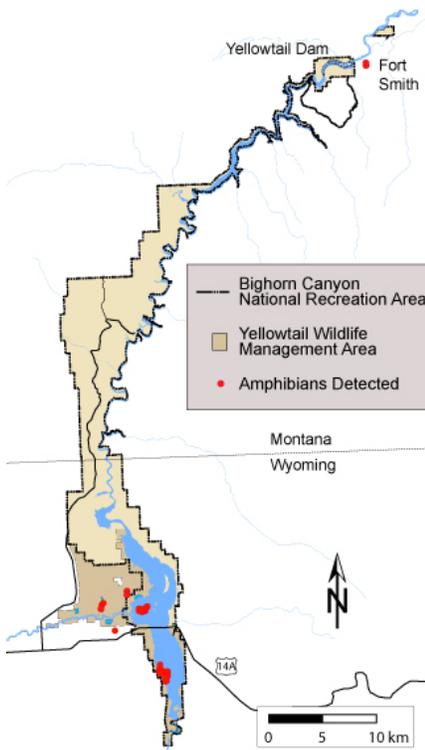


Figure 1. Locations where amphibians have been detected in Bighorn Canyon NRA during surveys in 2001, 2002, and 2008.

	Northern Leopard Frog <i>Rana pipiens</i>
	Woodhouse Toad <i>Bufo woodhousii</i>
	Boreal Chorus Frog <i>Pseudacris maculata</i>
	Plains Spadefoot <i>Spea bombifrons</i>

Figure 2. During the surveys in 2001–2002, 4 of 5 species known to occur at Bighorn Canyon NRA were observed.

at the southern end of Bighorn Canyon NRA within the Yellowtail Wildlife Habitat Management Area (Fig. 1), but there is some additional habitat at scattered locations throughout Bighorn Canyon NRA, including along the Bighorn River near Fort Smith (Montana), where Tiger Salamanders (*Ambystoma tigrinum*) and Woodhouse Toads (*Bufo woodhousii*) have been observed. During the surveys that took place in 2001–2002, 4 of 5 species known to occur at Bighorn Canyon NRA were observed (Fig. 2). All four of these species have Natural Heritage Conservation Status (www.natureserve.org) of G5, “Secure.”

Northern Leopard Frogs (*Rana pipiens*) were most abundant and comprised 53% of the total amphibian observations (through both auditory calling surveys and visual inspection of ponds). Woodhouse’s Toads comprised 35% of the amphibians observed, but were considered the most widespread in distribution. Boreal Chorus Frogs (*Pseudacris maculata*) comprised 11% of the amphibian observations. Only one Plains Spadefoot (*Spea bombifrons*) was observed, although they are believed to be present in greater numbers. This species can be difficult to detect because of its tendency to burrow in sandy substrates for extended periods of time. Tiger Salamanders, which are considered rare in Bighorn Canyon NRA, were not detected during these surveys. This species has not been observed in the park since 1985, when it was reported by park personnel near residential areas, the afterbay, sewage treatment ponds at Fort Smith, and at the Ewing-Snell ranch.