

Roadside Surveys for Calling Amphibians in Montana

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Since the first global assessment of amphibian populations in 2004, nearly a third of species are considered threatened with 43% experiencing population declines. Habitat loss, disease, and climate change are the main factors believed responsible for these declines. To assess the population status of amphibian species in eastern Montana, we repeated nocturnal calling surveys first performed in 2016. By comparing species detections across established routes, we sought to inform state conservation status ranks and identify Montana Species of Concern. In 2016, we surveyed 19 roadside transects for breeding amphibians and detected five species: Boreal Chorus Frog (*Pseudacris maculata*), Northern Leopard Frog (*Lithobates pipiens*), Great Plains Toad (*Anaxyrus cognatus*), Woodhouse's Toad (*A. woodhousii*), and Plains Spadefoot (*Spea bombifrons*). We repeated these transects in 2022 with the addition of five new routes and detected these same five species. The greatest number of detections were of Boreal Chorus Frogs (26%) followed by Woodhouse's Toad (6%), Plains Spadefoot (3%), and Great Plains Toad (2%). Comparing diversity between years, 2016 had up to three species detected per transect, while diversity in 2022 ranged from no detections up to five species on at least one transect. Of the 19 repeated surveys, 52.6% remained consistent in species composition and 26.3% had an increase in species diversity between the two years of survey effort. As species detections across transects changed little between 2016 and 2022, it is likely that populations of these species are stable within this area and current taxonomic statuses remain valid.