

## From Echolocation to Action: How Montana’s Bat Monitoring Program Informs Management

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Montana’s Bat Monitoring Program has grown substantially over the past decade as threats such as white-nose syndrome (WNS) have become more prevalent within the state. Several bat species have been listed, or petitioned, under the Endangered Species Act (ESA). In 2025, Montana Fish, Wildlife and Parks (MFWP) and partners continued targeted disease surveillance and monitoring to document the spread of WNS, and the fungus that causes it (*Pseudogymnoascus destructans*; Pd), within Montana. This effort is coupled with surveys, using the North American Bat Monitoring Program, to evaluate disease impacts on bat populations. Data collected during these efforts have been used to model the effect of Pd on WNS-susceptible species and inform species status rankings and the 2025 State Wildlife Action Plan (SWAP) revision. Additionally, monitoring data inform management and conservation decisions. For example, experts identified vaccines as the action most likely to mitigate WNS-driven declines during a structured decision-making process using monitoring data, and the SWAP identifies this conservation action/intervention as a priority. Although this action is infeasible at a statewide scale, MFWP plans to implement oral vaccination to WNS-susceptible bats at select maternity roosts to facilitate persistence of larger colonies during disease invasion and epidemic phases. We will evaluate whether vaccination can help facilitate population recovery in local areas, in collaboration with national efforts to track landscape-level impacts. This will allow MFWP to build on the existing Bat Monitoring Program while undertaking targeted management interventions aimed at preserving large colonies of WNS-susceptible species listed or petitioned under the ESA.