

Long-eared Myotis (*Myotis evotis*)

Species Status Statement.

Distribution

Long-eared myotis is widely distributed in western North America, from British Columbia through Baja California and eastward to the Dakotas and Colorado (NatureServe 2018). This bat occurs throughout Utah (Oliver 2000, UDWR data).

Table 1. Utah counties currently occupied by this species.

Long-eared Myotis
ALL

Abundance and Trends

Long-eared myotis is widespread and locally common to rare throughout its range (NatureServe 2018). In Utah, both capture and acoustic surveys frequently detect this bat. Monitoring surveys since 2009 show stable occupancy (UDWR data).

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Long-eared myotis utilizes a wide variety of habitats in Utah, from lowland riparian and sagebrush to montane forests (Oliver 2000, UDWR data). The species also uses a wide range of roost sites including live and dead trees, rock crevices, mines, caves, and buildings (NatureServe 2018). The wintering habitats of long-eared myotis in Utah are unknown; presumably, it hibernates below the frost line.

Threats to the Species

The invasive fungal disease white-nosed syndrome (WNS) is the greatest known threat to long-eared myotis. The disease affects bats during hibernation leading to dehydration, emaciation, and eventual death. In 2019, a long-eared myotis from Washington State tested positive for WNS. However, there are currently no estimates of population impact.

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).

Long-eared Myotis
High
Disease – Alien Organisms

Rationale for Designation.

As of 2019, Utah managers have not detected WNS in the state. Elsewhere, managers have documented the causative fungus as near as eastern Wyoming and western Washington. Given its past rate of spread, WNS will probably reach Utah within 5 years. The impact of WNS on bat populations is highly variable. Some species experience population declines of greater than ninety percent, while other species exhibit more moderate population declines, and still others show no population-level impacts (Lanwig et al. 2016). Managers do not know how WNS will affect long-eared myotis populations, but given the rapid declines in other small-bodied bat species, there is cause for increased conservation attention.

Conservation actions will focus on implementing the Utah Bat Conservation Plan and WNS Management and Surveillance Protocol (Oliver et al. 2009, Roug et al. 2016). These documents outline goals, objectives, and strategies designed to prevent this disease from establishing in Utah bat populations, and provide management and surveillance strategies should WNS be detected in Utah.

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. Endangered Species Act listing of other bat species in eastern states has prompted requirements for extensive regulatory compliance for a wide variety of project categories including transportation, utility rights-of-way, habitat management, and forest management. Given the wide distribution of this bat, formal and informal consultation could be required for most projects with a federal nexus. Restrictions would be placed on activities around sensitive areas including maternity roosts and hibernacula. Even where mitigation is not ultimately required, ESA compliance increases the cost and alters timelines of many projects.

Literature Cited.

Langwig K.E., W.F. Frick, J.R. Hoyt, K.L. Parise, K.P. Drees., T.H. Kunz, J.T. Foster, and A.M. Kilpatrick. 2016. Drivers of variation in species impacts for a multi-host fungal disease of bats. *Philosophical Transactions of the Royal Society B* 371: 20150456.
<http://dx.doi.org/10.1098/rstb.2015.0456>

- NatureServe. 2018. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: April 24, 2019).
- Oliver, G.V. 2000. The bats of Utah. Publication Number 00-14. Utah Division of Wildlife Resources. Salt Lake City, Utah, USA. 140pp.
- Oliver, G., K. Hersey, A. Kozlowski, K. Day, and K. Bunnell. 2009. Utah bat conservation plan. Utah Division of Wildlife Resources. Salt Lake City, Utah, USA.
- Roug, A, K. Hersey, K. Day, and G.V. Oliver. 2016. Utah white-nose syndrome management and surveillance protocol. Utah Division of Wildlife Resources. Salt Lake City, Utah, USA.
- Salafsky, N., D. Salzer, A.J. Stattersfield, C. Hilton-Taylor, R. Neugarten, S.H.M. Butchart, B. Collen, N. Cox, L.L. Master, S. O'Connor, and D. Wilkie. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. *Conservation Biology* 22: 897–911.
- Utah Division of Wildlife Resources [UDWR]. 2015. Utah Wildlife Action Plan: A plan for managing native wildlife species and their habitats to help prevent listings under the Endangered Species Act 2015-2025. Publication Number 15-14, 385 pp.