Note: As state, provincial, federal, and local governments respond to the human effects of SARS-CoV-2 virus and the COVID-19 pandemic, the wildlife management community is working to understand and address potential risks and impacts to wildlife species. The Association of Fish and Wildlife Agencies’ (AFWA) Fish and Wildlife Health Committee and Bat Working Group have collaborated on the following voluntary interim guidance to provide agencies with options for consideration as we continue to learn more about the disease and potential impacts to bats and other wildlife. This guidance is intended to inform internal deliberations at fish and wildlife agencies regarding immediate, near-term decisions concerning activities that are conducted or permitted by the agency which involve handling or other close human proximity to bats. This document will be updated as new information becomes available.

Overview

This guidance was developed to help mitigate potential risks associated with reverse zoonosis (i.e., humans infecting wildlife) of SARS-CoV-2 virus (the causal agent of COVID-19) from infected humans to North American bats which are presumed to be naïve hosts. It is currently unknown if the virus has or will spillover to North American bats, if these bats are susceptible to infection, could serve as a new reservoir for the disease, or if the virus will result in morbidity and mortality, particularly in bats weakened by white-nose syndrome or other stressors.

The U.S. Geological Survey, U.S. Fish and Wildlife Service, U. S. Forest Service, and state fish and wildlife agency and AFWA staff are working on a risk assessment and associated analyses to help answer these questions. This guidance has been prepared to provide immediate interim recommendations to state, provincial, and federal fish and wildlife agencies and will be updated once the risk assessment has been completed and more evidence-based information becomes available.

Research and Monitoring Recommendations

It is recommended that state, territorial, provincial, and federal fish and wildlife agency biologists and permitted researchers, consultants, or others conducting activities that involve the capture and/or direct handling of bats, consider postponing those activities until more information about susceptibility of North American bats to SARS-CoV-2 becomes available. While it is likely that the use of personal protective equipment (PPE) would reduce potential transmission of the virus, it is unclear if additional measures should be adopted. Furthermore, the global shortage of PPE for human healthcare and pandemic response warrants that this equipment be reserved for the highest human health need. Bat work linked to the COVID-19 response (e.g. research on COVID-19 susceptibility, surveillance of bat populations for SARS-CoV-2) or other public health and safety issues (e.g., rabies exposure testing) should proceed until further guidance is available. State agencies and consultants should check with their appropriate U. S. Fish and Wildlife Service Field Office regarding completion of current and ongoing consultation work for threatened and endangered species.
Rehabilitation Recommendations

Some wildlife rehabilitators have direct contact with bats and there is the potential for human to bat transmission of the SARS-CoV-2 virus. Given the diversity of viral presentation in humans, the current level of testing available, and the limited availability of PPE, it is difficult to know the risk of viral transmission by a rehabilitator to animals in their care. For these reasons, we recommend that wildlife rehabilitators not accept bats for rehabilitation at the present time. Additionally, they should immediately implement enhanced protection measures for bats currently in their care including, but not limited to, keeping caretakers, volunteers and the public who have been exposed to or have symptoms of COVID-19 away from bats and holding facilities. Rehabilitators should also engage in more frequent hand washing and disinfection of husbandry materials and facilities.

Each agency will need to assess the values and risks associated with the rehabilitation of state, provincial, or federally listed species. Rehabilitators will need to have appropriate permits, or coverage under state permit holders, to handle and maintain animals in their care. Any decisions regarding possible euthanasia of federally listed bats will need to be undertaken in accordance with relevant statutes and regulations and in consultation with the appropriate U. S. Fish and Wildlife Service Field Office. If a state does decide to allow listed species to be accepted for rehabilitation, subsequent release should still be postponed until further guidance is available.

While there is concern about retaining bats scheduled for release, there is presently no established diagnostic testing protocol to confirm that a bat is SARS-CoV-2 negative. Further, routine diagnostic screening for COVID-19 status of rehabilitators is not possible at this time. In some situations where facilities have stringent biosecurity protocols in place and bats currently held have been overwintered with minimal human contact, immediate release may be appropriate. However, since only a few rehabilitation facilities will meet those criteria, it is recommended that, in most cases, release of any bat currently held in a rehabilitation facility be postponed. As SARS-CoV-2 testing methods for bats and other animals become available and the associated protocols are established, this guidance is anticipated to change.

State and provincial fish and wildlife agencies should provide guidance to the public, state and local animal control officers, and the rehabilitation community about how to manage situations involving injured bats or bat pups. The message that ‘temporarily suspending rehabilitation activities may be the best course of action for all of our North American bats’ is important to convey. Any potential rabies exposures should proceed in the same manner as currently followed in each state or province.

Nuisance Wildlife Control Operator Recommendations

Some Nuisance Wildlife Control Operators come into regular contact with bats. Many of the bat exclusion activities they perform can be completed without direct human to bat contact (e.g., installation of one-way doors, bat-proofing an eave). PPE use will further limit possible human to bat exposure; however, any use of PPE will necessarily be contingent on the availability of PPE above and beyond the current and anticipated needs for human pandemic response. The National Wildlife Control Operators Association (NWCOA) has issued bat COVID-19 guidance to its members which is largely consistent with the approach recommended here.
Each state or province should review its current regulations and guidance regarding disposition of bats captured in homes and dwellings in order to minimize the risk of inadvertent disease transmission. While the humane euthanasia of such bats presents the lowest risk of inadvertent transmission of SARS-CoV-2 from humans to bats, release of bats could potentially be an acceptable practice when the likelihood of disease transmission is low.

It is recommended that individual bats captured in living spaces within homes or other dwellings, if there is suspected exposure to rabies or SARS-CoV-2 or if the bat must be directly handled for removal, be humanely euthanized. However, it is not recommended that maternity colonies in homes or other artificial structures be euthanized. Such situations should be addressed on a case-by-case basis. Use of metal bat traps or cages to catch multiple bats should be discouraged because it could be difficult to adequately decontaminate after installation. Any potential rabies exposures cases should continue to follow the process currently in place in each state or province.

**Management Recommendations**

While humans may unknowingly shed virus in environments used by bats such as caves, the risk of transmission of SARS-CoV-2 to bats is unknown. Until more information is available, it is recommended that fish and wildlife agencies use their discretion to determine how best to manage these risks on state, federal, and provincial lands. Several states have issued or are contemplating issuing cave closures on state managed lands. Such closures are intended to protect bats, but are also for human safety, given concerns for social distancing and the stress on emergency first responders should there be an accident. In order to maintain public safety, the inspection of cave gates, other routine inspections, and agency patrols should proceed as scheduled, in accordance with government-ordered work restrictions. Evening emergence counts at caves or bat house exit counts should only be conducted if the counts can occur under current guidelines for human social distancing.