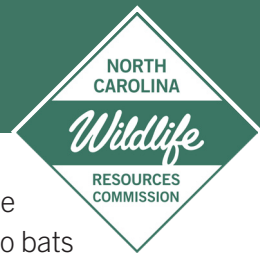


Bat Activities During COVID-19



The U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), and university wildlife disease experts are conducting a risk assessment to determine the likelihood of viral transmission from humans to bats because the potential for SARS-Cov-2 to infect North American bats is unknown. Recommendations on best practices to follow when working with bats will be released as soon as evidence-based guidelines become available. Interim voluntary guidance from the USFWS and the Association of Fish and Wildlife Agencies (AFWA) recommends **postponing activities** involving direct contact with bats until results from the risk assessment are available. Therefore, out of concern for the welfare of bat populations, many of which have been impacted significantly by white-nose syndrome, **the North Carolina Wildlife Resources Commission (NCWRC) is temporarily suspending activities requiring direct contact with bats.** This suspension applies to NCWRC staff, scientific collection license holders, endangered species permit holders, wildlife rehabilitators, and Wildlife Damage Control Agents.

Researcher Recommendations

This temporary suspension applies to activities that involve direct contact or proximity within 6 ft. of bats, such as mist-netting or other capture surveys. Research activities that can maintain a 6-ft. distance from bats, like acoustic monitoring, emergence surveys, or roost monitoring are not subject to this suspension.

Rehabilitation Recommendations

The NCWRC recommends that wildlife rehabilitators not accept bats for rehabilitation at this time. Because the presentation of the virus in humans is variable, it is difficult to determine the risk of transmission from humans to bats when providing care. Enhanced protection measures should be taken for any bats currently in care. These measures include, 1) keeping people who have been exposed to or have symptoms of COVID-19 away from bats and holding facilities, 2) engaging in more frequent hand washing and disinfection of materials and facilities, and 3) postponing release of bats until more guidance is available.

Wildlife Damage Control Agent Recommendations

The NCWRC recommends following the National Wildlife Control Operators Association (NWCOA) COVID-19 guidance. As a reminder, bat exclusions are not recommended during the maternity season (May 1 – July 31).

The NCWRC recommends that individual bats captured in living spaces be humanely euthanized. Any potential rabies exposure cases should follow county public health departments' protocols. Humane euthanasia should be performed by a licensed WDCA, an appropriate WRC employee, or a trained Animal Control agent in the counties where Animal Control deals with wildlife. Contact with bats should be limited to as few individuals as possible, so taking a bat to a veterinary clinic or rehab facility for euthanasia should be a last resort.

Information for the public (for Helpline):

Bat Conservation International's FAQ on Bats, Coronaviruses, and Zoonotic Disease

<http://www.batcon.org/resources/media-education/news-room/gen-news/80-latest-news/1227-bci-s-faq-on-bats-coronaviruses-and-zoonotic-disease>

Video on bat immune systems and zoonotic diseases: <https://www.youtube.com/watch?v=iJ2jDPgvbTY>

**For questions or concerns, contact Katherine Etchison, NCWRC Mammalogist
828-545-8328 or katherine.etchison@ncwildlife.org**



NATIONAL WILDLIFE CONTROL OPERATORS ASSOCIATION
COMPETENCE INTEGRITY SERVICE

The National Wildlife Control Operators Association (NWCOA) has been made aware of concerns regarding transfer of COVID-19 from humans to bat populations. NWCOA, its members, and certified operators all recognize the ecological benefits of a healthy bat population. Our certification programs and training opportunities encourage wildlife control operators to always use personal protective equipment (PPE) and stringent sanitation protocols for not only their own protection, but to prevent the spread of White-nose Syndrome (WNS). At this time, it is imperative that anyone working in close proximity with bats utilize proper PPE to prevent possible spread of COVID-19 to bat populations. NWCOA recommends the following protocols for proper PPE:

- Washable or disposable coveralls or a change of clothing and footwear should be used to prevent movement of pathogens between sites. Bag non-disposable equipment before transport and then decontaminate following WNS guidelines.
- A face mask should be worn to block or minimize the exchange of respiratory droplets.
 - An N-95 respirator is ideal. Dispose of filters after each job and decontaminate respirator following WNS guidelines.
- Disposable or reusable gloves that can be decontaminated per White-nose Syndrome protocol should be used when working around roost sites to prevent the spread of pathogens between humans and animals or vice versa.
- If you must directly handle a bat, bite proof gloves must be cleaned following WNS decontamination protocols.
- Dispose of vacuum bags after each guano mitigation project and clean hard-surfaced unit, hose and nozzle following WNS decontamination guidelines.
- Decontaminate lights, headlamps and other cursory items used to illuminate the work area in an attic or interior space.
- Dispose of any drop clothes following each guano mitigation project.

NWCOA believes that an abundance of caution should be exercised until further notice. We believe that wildlife control operators with proper training should continue to provide bat exclusion and removal projects to prevent human exposure to rabies and other zoonotics. Unless absolutely necessary, operators should refrain from entering roosting sites during inspection, especially during the maternal season.

NATIONAL WILDLIFE CONTROL OPERATORS ASSOCIATION
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Association of Fish & Wildlife Agencies

Voluntary Interim Guidance for Bat-related Activities in Response to COVID-19

Version 1.0 (April 13, 2020)



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.