COVID-19 Infection Prevention and Control Assessment Tool for Captive Wildlife Facilities: Zoos, Sanctuaries, Aquaria, and Wild Animal Rehabilitation Centers

This checklist provides a guide for baseline biosecurity measures and controls that should be in place to prevent transmission of SARS-CoV-2 between animals housed in captive wildlife facilities and people (including employees such as caretakers, maintenance staff and other employees, volunteers, and the public) who may have direct or indirect contact with animals or their environment

This assessment tool is meant to be used by the administrator(s) in charge of infection prevention and control at the facility, occupational health, respiratory protection, human resources, veterinary staff, or facilities and maintenance. It is not meant to be an exhaustive list of considerations for preventing SARS-CoV-2 transmission, but a quick check of the minimum components of a biosecurity plan to ensure a baseline level of protection is in place. A layered approach using multiple strategies, including social distancing, personal protective equipment, hand hygiene, vaccination, and other items described in this list is recommended to reduce the spread of disease between people (whether working or visiting) and animals housed at these facilities.

Instructions:

- While completing this assessment, consider all areas of the facility where susceptible animal species are housed and complete a separate assessment for each if policies and practices differ depending on the housing location.
- The preferred answer to most questions is yes, unless specified otherwise.
- Suggestions are provided to improve the biosecurity area in the case that it is not currently being implemented at the facility.
- A list of resources is available at the end of the checklist.

Facility self-assessment checklist for biosecurity measures in place to prevent COVID-19 transmission between people and animals at zoos, sanctuaries, aquaria, and wild animal rehabilitation centers.

Section 1. General Infection Prevention and Control

Question	Yes	No	Suggestions to improve this biosecurity area
GENERAL FACILITY MANAGEMENT			
1. Are COVID-19 symptom and temperature screening in place for:			A COVID-19 symptom and temperature screening system is recommended for anyone entering the facility. Anyone experiencing COVID-19 symptoms, is confirmed or suspected of having COVID-19, or exposure to someone else with COVID-19 should **not** enter the facility or interact with or around known or susceptible animal species. An example of a screening program can be found here: https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/Employervisitorscreeningguidance.pdf

			Symptoms of COVID-19: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html
1a. Employees at the start of each shift			
1b. Volunteers at the start of each shift			
1c. Visitors upon arrival before entering the facility			
2. Is there a capacity limit on how many visitors can be in the facility at any one time or on any day?			Implementing a reservation system so that visitors can book in advance for specific visit times can help reduce the number of people at the facility at any given time, thereby reducing crowding around animal exhibits and improving social distancing between people, and between people and animals.
3. Are there policies to prohibit visitors from feeding animals?			Prohibiting animal feeding is important not only to maintain nutritionally balanced diets, but also because throwing food or objects into habitats can risk animal health and safety. Signage indicating this behavior is prohibited around the facility may help discourage visitors from engaging in it. If visitors are seen engaging in this behavior it is important to have a system for removing the item expediently from the enclosure and removing the visitor from the facility.
4. Is there adequate signage to remind employees, volunteers, and visitors to social distance?			
5. Is there signage to alert employees and visitors of the potential for SARS-CoV-2 transmission from people to animals, and to describe enhanced COVID-19 prevention measures at entry points and near exhibits housing susceptible animal species?			
6. Are face masks (e.g., multiple-ply surgical mask) available or provided to employees, volunteers, and visitors?			Consider making face masks available to employees, volunteers, and visitors who do not have their own. See Section 6. Personal Protective Equipment, for more information regarding face masks.
SUSCEPTIBLE SPECIES MANAGEMENT			
7. Have the species known or suspected to be susceptible to SARS-CoV-2 been identified within the facility?			Animals that are known to be susceptible to natural SARS-CoV-2 infection currently include members of the families Felidae, Canidae, Cervidae, Viverridae, Mustelidae, Procyonidae, Hominoidae, and Hyenidae. An up-to-date list of all confirmed cases of SARS-CoV-2 in animals in the United States is maintained by the US Department of Agriculture (USDA).

8. Is there a log of employees that have direct contact with animals that are known or suspected to be susceptible to SARS-CoV-2?			A log is recommended to keep track of who is interacting with known or confirmed susceptible species for contact tracing purposes in case a person or animal tests positive for SARS-CoV-2. The minimum information collected in the log should include the person's name, date of animal contact, and species they interacted with or handled.
8a. Does the log contain the following:			
Name			
Date of contact			
Species they interacted with or handled			
9. Are the number of employees working with or near susceptible animal species limited to the minimum number necessary to safely complete tasks?			Limit the number of employees including caretakers, veterinary staff, maintenance staff, and other ancillary staff who are allowed in to or near susceptible species enclosures. Minimize the number of employees who have direct contact with susceptible species. If possible, restrict volunteers from working with these species to further reduce the risk of transmission.
9a. Are separate employees assigned to care for specific susceptible animal species to avoid cross contamination?			
10. Is the sequence of caretaking animals in line with the following: -First: Handle or treat susceptible animals -Last: Handle or treat animals that have clinical signs compatible with SARS-CoV-2.			Animals susceptible to SARS-CoV-2 should be handled or treated first to minimize potential cross contamination from animals that have clinical signs compatible with SARS-CoV-2. Animals with clinical signs compatible with SARS-CoV-2 should be kept in an isolated area if possible. All other animals should be treated between these two groups, keeping in mind to handle younger animals before adult animals This sequence of caretaking should be in place for any group of animals that have the same caretakers.
11. Are there barriers to prevent visitors from coming into close contact with the susceptible animals?			Physical barriers are important to keep visitors from coming into close contact with animals and to prevent the virus from spreading between people and animals. Examples of barriers include glass or plexiglass, fencing material, or temporary barriers around an exhibit to increase the distance between the animals and visitors. Measure the distance between the public viewing point and an animal enclosure

			both indoors and outdoors to ensure they are greater than 6 feet or more because the risk of infection decreases with increasing distance. Permanent or temporary barriers are recommended, whichever is feasible. In some instances, a temporary barrier in addition to a permanent barrier is needed to maximize the distance between animals and visitors.
11a. Permanent barriers in indoor viewing areas			
11b. Permanent barriers in outdoor viewing areas			
11c. Temporary barriers to maximize distance between people and animals in indoor viewing areas			
11d. Temporary barriers to maximize distance between people and animals in outdoor viewing areas			
12. Are there barriers in place that separate susceptible animal enclosures by at least 6 feet?			Use of a solid barrier between enclosures (e.g., between open mesh style cages) is recommended to minimize virus transmission between animal enclosures through the air.
13. Are there barriers or methods to exclude free-ranging wildlife or pests from coming into contact with susceptible animals housed in the facility?			
14. Has a heating, ventilation, and air conditioning (HVAC) system assessment been conducted?			The risk of spreading SARS-CoV-2 through ventilation systems is not clear. Consider consulting with an experienced (HVAC) professional to conduct a ventilation system assessment to ensure ventilation systems operate properly and provide acceptable indoor air quality for each enclosure area and between enclosures and workspaces. Some of the questions to consider during the ventilation assessment are included in questions 14a through 14d.

14a. Is the airflow in susceptible animal indoor enclosures recirculated?			Ideally, air recirculation should be minimized and not recirculated between indoor enclosures. See CDC's Tools to Improve Ventilation page for additional guidance, **including no cost and low cost examples** of ventilation interventions to improve air quality.
14b. Is airflow shared between workspaces and indoor animal enclosures housing susceptible animals?			See CDC's Tools to Improve Ventilation page for additional guidance.
14c. Are HEPA filters used in indoor enclosures?			High-efficiency particulate air (HEPA) fan/filtration systems can enhance air cleaning. See CDC's Tools to Improve Ventilation page for additional guidance.
14d. Do multiple susceptible animal in different indoor enclosures share a single air system?			See CDC's Tools to Improve Ventilation page for additional guidance.
15. Is there an isolation area to keep animals with respiratory (coughing, sneezing, nasal discharge) or gastrointestinal (diarrhea, vomiting) signs?			
16. Are feces removed regularly (at least daily) from animal enclosures and properly disposed of?			SARS-CoV-2 may be shed in feces, thus ensure feces are removed from the animal area daily or more often if needed.
17. Are footbaths containing a solution of EPA-listed disinfectant for use against SARS-CoV-2 at entry and exit points in areas housing susceptible animals?			
17a. Are the footbaths changed at least once per day?			
17b. Is there adequate signage to instruct employees to clean organic matter off of their boots before using the footbath?			Signage should be visible and in the appropriate languages according to employees' needs.

NOTES:

Section 2: Hand Hygiene

Question	Yes	No	Suggestions to improve this biosecurity area
1. Are hand washing stations available in or near the animal areas for:			Ensure handwashing stations are easily accessible for employees and visitors in all areas of the facility and especially where people may be in contact with animals, the animals enclosure and animal feed, or areas where people are eating and drinking. If handwashing stations are not easily accessible, ensure hand sanitizer containing at least 60% alcohol is available. More information on hand hygiene in public settings where people have contact with animals is available here: NASPHV Animal Contact Compendium
1a. Employees and volunteers			
1b. Visitors			
2. In the case that hand washing stations are not easily accessible, is hand sanitizer containing at least 60% alcohol available in or near the animal areas for:			
2a. Employees and volunteers			
2b. Visitors to the facility			
3. Is there signage to encourage employees, volunteers, and visitors to perform hand hygiene:			Signage may include posters or placards that are clearly visible and strategically placed to show where hand washing stations are available as well as proper hand washing instructions. There are many resources and information on handwashing, including some found here: https://www.cdc.gov/healthypets/specific-groups/stay-healthy-animal-exhibits.html and NASPHV Animal Contact Compendium
3a. Before and after having physical contact with animals			

3b. Before and after putting on personal protective equipment (PPE) and taking off PPE			
3c. After cleaning and disinfecting the animal area or equipment			
3d. After using the bathroom			
3e. Before entering and after leaving animal areas			
4. Are handwashing signs available in multiple age-appropriate and language-appropriate formats?			It is important ensure communications such as signage are available in different languages and with age-appropriate messages depending on the demographics of employees, volunteers, and visitors to the facility.
5. Have employees and volunteers received hand hygiene education?			Information on hand hygiene that can be shared with employees and volunteers working in animal contact settings can be found in the NASPHV Animal Contact Compendium.
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Section 3: Environmental Cleaning

Question	Yes	No	Suggestions to improve this biosecurity area
1. List the cleaning and disinfection products used in the facility (if one product is used to clean and other to disinfect, list both products):			Ensure all cleaning and disinfection products are on the EPA List N: Disinfectants for COVID-19 as these products are known to effectively kill the virus **when used according to label directions**. Review cleaning and disinfection protocols for each surface area to ensure the protocol matches the label directions. Observe work practices to determine if the protocols are being followed by employees and provide training or refresher training on appropriate protocols. Disinfection of frequently contacted surfaces in animal areas and workspaces is recommended.

1a. For **high touch surfaces** in animal husbandry or veterinary areas:			List Product (s): 1. 2. (if applicable)
1a.a. Are these products on EPA List N: Disinfectants for COVID-19?			
1a.b. Are these products being used according to the label directions?			
1b. For **equipment** in animal husbandry or veterinary areas:			List Product (s): 1. 2. (if applicable)
1.b.a. Are these products on EPA List N: Disinfectants for COVID-19?			
1.b.b. Are these products being used according to the label directions?			
1c. For **floors and other surfaces** in animal husbandry or veterinary: areas:			List Product (s): 1. 2. (if applicable)
1.c.a. Is/are these products on EPA List N: Disinfectants for COVID-19?			
1.c.b. Are the products being used according to the label directions?			

2. Are high-pressure hoses or power washers used to clean and disinfect animal areas?			Aerosols may remain in the air for hours following an aerosol generating procedure. Eliminate or reduce aerosol generating procedures and activities (e.g., using a high-pressure hose or power-washer to clean an animal area) as much as possible to prevent aerosolization and spread of the virus especially when cleaning housing areas for susceptible animal species.
NOTES:			

Section 4: SARS-CoV-2 Vaccination and Testing

Question	Yes	No	Suggestions to improve this biosecurity area
HUMAN HEALTH			
1. Does the facility have a SARS-CoV-2 **testing policy** for:			
1a. Employees			
1b. Volunteers			
1c. Visitors			Consider requiring a proof of a recent negative test result (within 24 hours) for visitors participating in activities that may result in close contact with susceptible animal species (e.g., experiences or behind-the-scenes activities)
2. Does the facility have a SARS-CoV-2 **vaccination policy** for:			Vaccination is the most effective way to prevent COVID-19 spread between people, and between people and animals. See more at CDC's Vaccines for COVID-19 page.
2a. Employees			
2b. Volunteers			
2c. Visitors			Consider requiring proof of vaccination for visitors participating in activities that may result in close contact with susceptible animal species (e.g., experiences or behind-the-scenes activities)
3. If vaccination policies cannot be mandated, can the facility encourage or incentivize vaccination in employees and volunteers?			Consider incentivizing vaccination for employees and volunteers to improve vaccination compliance.

ANIMAL HEALTH			
4. Does the facility have a SARS-CoV-2 testing policy or protocol for susceptible animal species?			Having a testing protocol in place is recommended to be prepared if an animal develops clinical signs consistent with SARS-CoV-2. This might include triggers to determine when testing animals is warranted.
5. In the case that an animal is suspected or known to have been exposed* to an infected person or animal, is the animal referred for SARS-CoV-2 testing?			Testing guidance for zoo species is available at Evaluation for SARS-CoV-2 Testing in Animals | CDC
6. If an animal demonstrates clinical signs compatible with SARS-CoV-2 infection without a known exposure to an infected person or animal, is the animal referred for SARS-CoV-2 testing?			In the case that an animal demonstrates clinical signs compatible with SARS-CoV-2, best practice recommendations are to test for SARS-CoV-2 at the same time as other routine illnesses and ideally to ensure testing occurs before multiple animals begin showing clinical signs consistent with SARS-CoV-2.
7. Have the susceptible species received the SARS-CoV-2 vaccine?			SARS-CoV-2 vaccination of susceptible animals may reduce the risk of infection or severe disease. Felid TAG supports vaccination of all non-domestic felids with the Zoetis vaccine.
8. If all susceptible species have not yet been vaccinated, is there a plan for vaccination to occur?			Make a vaccination plan for susceptible species to implement once the vaccine is available to the facility.
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* Exposure is defined as:

- Being within approximately 6 feet (2 meters) of a person with suspected or confirmed COVID-19 starting from 2 days before the person's illness onset (or, for asymptomatic human patients, 2 days before positive specimen collection) until 10 days after the date infection is identified.
- Having direct contact with infectious secretions from a person with suspected or confirmed COVID-19 starting from 2 days before the person's illness onset (or, for asymptomatic human patients, 2 days before positive specimen collection) until 10 days after the date infection is identified. Direct contact could include an animal being coughed, sneezed, or spit on by an infected person or sharing food or consuming something that was recently contaminated with an infected person's mucous or saliva.

Section 5: Staff and Visitor Education

Question	Yes	No	Suggestions to improve this biosecurity area
1. Are educational signs, informational placards, or other			Communication and educational materials should include information to help visitors understand why their use of masks and social distancing, as well as not visiting the zoo if they are ill, confirmed, or

materials available for visitors to help them understand the importance of adhering to COVID-19 precautions during their visit?			potentially exposed to COVID-19 is important to keep animals, staff, and other visitors safe. Visitors may not be aware that many animal species are susceptible to COVID-19 and knowing this might help change their behavior during their zoo visit.
2. Has information been shared to all employees and volunteers on which animals are confirmed or known to be susceptible to SARS-CoV-2 infection?			
3. Have employees and volunteers received information on **their role** in taking additional precautions to ensure disease transmission is prevented for susceptible animal species?			
4. Have employees and volunteers received risk mitigation training that includes training on measures that reduce the transmission of SARS-CoV-2 between people and between people and animals?			
NOTES:			

Section 6: Personal Protective Equipment (PPE)

Question	Yes	No	Suggestions to improve this biosecurity area 0
1. Does the facility have a respiratory protection program?			Respirators (e.g., N95 or higher protection) should be used in conjunction with an OSHA-compliant Respiratory Protection Program (29 CFR 1910.134) that includes medical evaluation, training, and fit testing. Some states may have applicable Federal OSHA-approved State plans. Information on Federal OSHA-approved State plans can be found at https://www.osha.gov/stateplans.

			More information on respiratory protection may be found here: https://www.osha.gov/respiratory-protection
1a. Does the facility have a dedicated, qualified person knowledgeable in occupational health who is responsible for implementing a robust respiratory protection program?			Assign or hire a qualified employee or contractor knowledgeable in occupational health to be responsible for implementing a robust respiratory protection program.
1b. Are all employees and volunteers working with or around susceptible animals included in the respiratory protection program?			
2. Are animal caretakers, veterinary staff, volunteers, or others who come into close contact with the animals or who spend time in close proximity to animals (e.g., in animal husbandry areas) required to wear any of the following when working with the or near susceptible animals:			
2a. Any form of respiratory protection? (e.g., surgical mask, cloth face mask, or other)			Well-fitting face masks covering the nose and mouth should be worn at all times when working indoors with susceptible animals, training, when preparing diets and enrichment items, and when working outdoors within 6 feet of felids, regardless of human vaccination status. Multiple-ply surgical masks are preferred over other cloth face masks.
2b. An N-95 respirator?			Upgrading to approved higher efficiency respiratory protection including fit-tested N-95 respirator should be considered, especially for those employees and volunteers working with or in close proximity to susceptible animal species. See this link for approved options: Approved Particulate Filtering Facepiece Respirators | NPPTL | NIOSH | CDC
2c. Protective eyewear when splashes or sprays may occur? (e.g., goggles or face shield)			

2d. Disposable exam gloves or other reusable gloves that can be decontaminated and changed between individuals?			Use gloves when in contact with animals and when handling items animals will contact (e.g., food preparation and enrichment items).
2e. Dedicated clothing and footwear that can be laundered separately after shifts or can be bagged and thrown away immediately after completing the shift?			
3. Have all employees (including animal caretakers, veterinary staff, or others) and volunteers who are required to wear PPE received training on proper PPE use, including donning (putting on) and doffing (taking off) PPE?			All employees and volunteers should receive information and training at the start of using PPE and annual refresher training as part of a respiratory protection program. Training should include information on putting PPE on (donning), taking it off (doffing), making sure it fits correctly, disposal and storage, and for which activities it should be used. All employees or volunteers using a respirator should receive information on how to conduct a **user seal check** every time the respirator is worn to ensure a proper seal is achieved: https://www.cdc.gov/niosh/docs/2018-130/pdfs/2018-130.pdf
4. Are animal caretakers, veterinary staff, volunteers, or others who are required to wear an N-95 fit tested annually?			Fit-testing should occur at least annually or as needed if the wearer has significant changes in weight (which can change facial shape) or if the wearer uses a new type of respirator that they were not fit-tested for within the last year.
5. Are animal caretakers, veterinary staff, volunteers, or others who are required to wear an N-95 medically cleared annually?			A medical exam and medical clearance are components of a respirator program that ensures the person wearing PPE is medically able to do so. This is important in case the person is working in harsh conditions so that the PPE doesn't exacerbate underlying medical conditions.
6. Are **visitors** required to wear a face mask (e.g., surgical mask, cloth face mask, or other mask) when:			Ideally, face masks should be used during the entirety of the visit since there are many unknowns about species susceptibility and transmission of SARS-CoV-2 infection between people and animals. At minimum, visitors should wear face masks (ideally a well-fitting surgical mask is recommended) when visiting indoor exhibits housing susceptible animal species and participating in activities that may result in close contact with susceptible animal species (e.g., animal encounters or behind the scenes tours).
6a. At all times they are in the facility (indoors and outdoors)?			Ideally, face masks should be used during the entirety of the visit.
6b. Only when visiting indoor exhibits?			Face masks should be worn when visiting indoor exhibits to protect people and animals.

6c. Indoor and outdoor when visiting exhibits housing susceptible animals?			If face mask use is not required more broadly, consider requiring face masks for any exhibit housing susceptible animal species.
6d. Only indoors when visiting exhibits housing susceptible animals?			If face mask use is not required more broadly, consider requiring face masks when visiting indoor exhibits housing susceptible species.
6e. Only for direct contact or close contact with susceptible animals (e.g., animal encounters or behind the scenes tours)?			Face masks should always be worn when in direct contact or close contact with susceptible animals (ideally a well-fitting surgical mask is recommended).
7. Are N-95 respirators with exhalation valves allowed?			These should not be worn when visiting or working with or around animals or visiting animals because they do not prevent the wearers droplets from being released into the immediate environment and may, therefore, expose animals.
NOTES:			

Section 7: Other public health control measures

Question	Yes	No	Suggestions to improve this biosecurity area
1. Are there flexible, non-punitive sick leave policies in place that help encourage sick employees to stay home?			Non-punitive sick leave policies are an administrative option to help ensure those who are ill, suspected or confirmed to have COVID-19, or who may have been exposed, stay home to prevent infecting other people and animals.
2. Do employees work together in rotating shifts (e.g., 1 week on, 1 week off) to minimize the potential spread of COVID-19 between multiple groups of employees?			Minimizing contact between different groups of employees is one way to help reduce potential exposures to COVID-19 and to ensure that in the case of a person with a positive test result, there are still employees who were not in contact with the infected employee and thus do not have to quarantine.
3. Are there enforced social distancing policies for employees?			Everyone should implement social distancing (at least 6 feet apart) whenever possible between people and between people and animals, including during training, enrichment activities, feeding, and veterinary procedures.

4. Are policies in place to ensure adequate breaks for employees and/or volunteers that are required to wear PPE?			In order to increase compliance with PPE use, you may consider providing more frequent breaks to accommodate employees and volunteers wearing PPE for a shorter length of time. In this case, refresher training on how to put on and remove PPE without self-contaminating is advised.
5. Is there a reporting process in place to alert state and/or federal agencies of any SARS-CoV-2 susceptible animal with possible exposure to a person with COVID-19, especially in the case that the animals are displaying clinical signs consistent with SARS-CoV-2?			Develop a reporting plan and process to report to the state and/or federal public health and animal health officials any SARS-CoV-2 susceptible animals with possible exposure to a person with COVID-19, especially animals that are displaying clinical signs consistent with SARS-CoV-2 infection. Reporting animals with SARS-CoV-2 to health officials helps facility veterinarians and animal care staff take steps to prevent more animals from becoming infected, benefitting animal health and welfare at the facility. StatePublicHealthVeterinariansByState.pdf (nasphv.org) Federal and State Animal Health (usaha.org)
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RESOURCES:

Overview

-Animals that are known to be susceptible to natural SARS-CoV-2 infection currently include members of the families Felidae, Canidae, Cervidae, Viverridae, Mustelidae, Procyonidae, Hominoidae, and Hyenidae – an up-to-date list of all confirmed cases of SARS-CoV-2 in animals in the United States is maintained by the US Department of Agriculture (USDA).

-Clinical signs suspicious of SARS-CoV-2 in animals include: fever, coughing, difficulty breathing or shortness of breath, lethargy, sneezing, nasal discharge, ocular discharge, vomiting, and diarrhea.

-The decision to test animals, including zoo animals, should be made collaboratively using a One Health approach between local, state, and/or federal public health and animal health officials (see current lists for public health and animal health officials in within each jurisdiction). Animal testing for SARS-CoV-2 is available if public health and animal health officials agree the animal's case merits testing.

-Based on CDC's Criteria to Guide Evaluation and Laboratory Testing for SARS-CoV-2 in Animals, zoo animal testing may fall under the criteria below:

Threatened, endangered or otherwise imperiled/rare animal4 in a rehabilitation, sanctuary or zoological facility with possible exposure to SARS-CoV-2 through an infected person or animal.

AND

Animal is asymptomatic; OR Animal has clinical signs suspicious of SARS-CoV-2 infection

-Confirmatory testing through USDA's National Veterinary Services Laboratories (NVSL) is required for all animals except domestic cats and dogs in some circumstances. Please see: USDA's confirmatory testing strategy and reporting expectations.

-For specifics on sample collection and testing at USDA NVSL, please see FAQ for State Animal and Public Health Officials on Animal Coronavirus Testing.

Federal Resource Webpages

- CDC: COVID-19 and Animals
- CDC: Evaluation for SARS-CoV-2 Testing in Animals
- USDA: Confirmed Cases of SARS-CoV-2 in Animals in the United States
- USGS: Assessing the Risks Posed by SARS-CoV-2 in and via North American Bats—Decision Framing and Rapid Risk Assessment
- EPA: List N Advanced Search Page: Disinfectants for Coronavirus (COVID-19) | US EPA

Professional Organization Resource Webpages

- Zoo and Aquarium All Hazards Preparedness, Response, and Recovery (ZAHP) Fusion Center: Considerations for the management of non-domestic species in human care during COVID-19
- Association of Zoos and Aquariums COVID-19 Resources
- American Association of Zoo Veterinarians (AAZV)
- Felid TAG – Updated guidance for working around non-domestic felid species during the SARS-CoV-2 pandemic
- American Veterinary Medical Association: Disaster Preparedness Resources
- Association of Fish and Wildlife Agencies: COVID-19 and North American Species of Mustelidae, Felidae, and Canidae
- IUCN SSC Bat Specialist Group: recommendations to reduce the risk of transmission of SARS-CoV-2 from humans to bats in bat rescue and rehabilitation centers
- IUCN SSC Bat Specialist Group: Recommended Strategy for Researchers to Reduce the Risk of Transmission of SARS-CoV-2 from Humans to Bats
- The National Association of State Public Health Veterinarians: Compendium of Veterinary Standard Precautions for Zoonotic Disease Prevention in Veterinary Employees
- Wildlife Disease Association: COVID-19 Information