Endangered Species Act Precedents:
Infectious Disease Risk as Harassment and SARS-CoV-2

Rachel Garner - 3/10/2023

While the national state of emergency for Covid-19 is ending in May for the United States, risk considerations for the many animals in zoological collections that are vulnerable to SARS-CoV-2 must continue. Many zoological facilities[1] are considering ending their SARS-CoV-2 mitigation policies for staff and guests this spring, if they have not done so already. These are actions in alignment with current human public health policy and the national zeitgeist regarding the Covid-19 pandemic. However, an overlooked aspect of rescinding such requirements at zoological facilities is the strictures imposed by the Endangered Species Act on entities caring for endangered or threatened species in captive settings. According to two recent court rulings,[2] it is now an ESA violation — a type of harassment that qualifies as a "take" — to negligently expose endangered or threatened animals to an increased risk of disease. Ending some or all of the SARS-CoV-2 risk mitigation practices, such as staff masking and social distancing around susceptible species, may result in zoological facilities being in violation of the ESA. Because there is no clear-cut guidance for what risk mitigation policies will ensure a facility is protecting their animals from SARS-CoV-2 sufficiently enough to remain compliant with the law, failure by the zoological industry to understand and acknowledge this shift in the legal landscape may have disastrous and unexpected impacts. It is crucial for the industry to consult legal counsel regarding the potential impacts of changing infectious disease protocols in order to protect itself from ESA lawsuits.

This document contains an overview of ESA violations in captive settings and the lawsuits that set precedents regarding infectious disease risk and ESA violations. It also provides additional relevant information that zoological facilities and organizations will need to consider when moving forward, such as why it cannot be assumed that compliance with AZA-recommended protocols will be protective. This document is not legal advice and zoological facilities should consult legal counsel before taking any action.

[1] For the purposes of this document, the term "zoological facility" will be used to refer to all business establishments which care for captive wild and exotic animals.These facilities may or may not exhibit collection animals to the public.

[2] *People for the Ethical Treatment of Animals, Inc. v. Jeffrey L. Lowe*,5:21-0671-F (2022); *People for the Ethical Treatment of Animals, Inc. v. Tri-State Zoological Park of W. Md*, 8:17-cv-02148-PX (2019)

SARS-CoV-2 and exotic animal health

SARS-CoV-2 is a coronavirus that causes the disease COVID-19 in humans. Many non-human animals are at risk for infection by SARS-CoV-2, with varying levels of mortality risk. Infections have been identified in animals that are part of zoological facilities in most US states, as well as many internationally.[3] [4] According to the Zoo and Aquarium All Hazards Partnership, taxa currently known to be highly susceptible to the virus include members of the families Felidae, Canidae, Cervidae, Viverridae, Mustelidae, Procyonidae, Hominoidae, and Hyenidae.[5] The current list of non-domestic species known to have contracted SARS-CoV-2 (confirmed by a positive test) comprises tigers (Malayan, Amur, and Sumatran), lions (African and Asiatic), gorillas, snow leopards, leopards, leopard cats, hippopotami, otters (multiple spp), giant anteaters, hairy armadillos, badgers, beavers, spotted hyenas, binturong, coatimundi (multiple spp), cougars, camels, ferrets, fishing cats, red foxes, lynxes, deer (multiple spp), manatees, mandrills, marmosets, pine martens, squirrel monkeys, and mink.[6] [7] The impact of a SARS-CoV-2 infection on non-domestic animals varies: large felids seem to be highly susceptible, with lions[8] and snow leopards[9] (and a hippopotamus[10]) known to have succumbed during an active infection, and a tiger thought to have died from post-infection complications.[11] While it has generally been thought that there is only a risk of SARS-CoV-2 transmitting one-way in captive settings (from staff to animals), a

[3] Allender, M. C., Adkesson, M. J., Langan, J. N., Delk, K. W., Meehan, T., Aitken-Palmer, C., ... & Wang, L. (2022). Multi-species outbreak of SARS-CoV-2 Delta variant in a zoological institution, with the detection in two new families of carnivores. *Transboundary and Emerging Diseases*, *69*(5), e3060-e3075.
[4] Pappas, G., Vokou, D., Sainis, I., & Halley, J. M. (2022). SARS-CoV-2 as a Zooanthroponotic Infection: Spillbacks, Secondary Spillovers, and Their Importance. *Microorganisms*, *10*(11), 2166
[5] COVID-19 Infection Prevention and Control Assessment Tool for Captive Wildlife Facilities: Zoos, Sanctuaries, Aquaria, and Wild Animal Rehabilitation Centers. *Zoo and Aquarium All Hazards Partnership.* (November 30, 2021)
https://zahp.org/covid-19-infection-prevention-and-control-assessment-tool-for-captive-wildlife-facilities/
[6] Pappas, G., Vokou, D., Sainis, I., & Halley, J. M. (2022). SARS-CoV-2 as a Zooanthroponotic Infection: Spillbacks, Secondary Spillovers, and Their Importance. *Microorganisms*, *10*(11), 2166
[7] Confirmed Cases of Sars-CoV-2 in Animals in the United States Dashboard. *USDA APHIS*.
https://www.aphis.usda.gov/aphis/dashboards/tableau/sars-dashboard
[8] Lion at Honolulu Zoo dies after contracting COVID in case prompting broader concern. *Hawaii News Now.*
https://www.hawaiinewsnow.com/2021/10/16/lion-honolulu-zoo-dies-after-contracting-covid-case-prompting-broader-concern-facility/
[9] A zoo's three 'beloved' snow leopards die of covid-19, *The Washington Post.*
https://www.washingtonpost.com/science/2021/11/14/snow-leopard-death-covid/
A snow leopard at Miller Park Zoo dies from COVID-induced pneumonia, *WGLT.*
https://www.wglt.org/local-news/2022-01-06/a-snow-leopard-at-miller-park-zoo-is-mclean-countys-latest-death-from-covid-19
[10] Zoo hippo dies: Found with COVID-19 in Vietnam, *International Livestock Research Institute*
https://www.ilri.org/news/zoo-hippo-dies-covid-19-vietnam
[11] Tiger dies after contracting coronavirus at Ohio zoo, *The Washington Post*
https://www.washingtonpost.com/health/2022/06/30/ohio-tiger-covid-death-zoo/

recent infection at an Illinois zoo indicates that it also may be possible for infected animals to pass the virus to nearby humans.[12]

Harassment: strictures on "taking" an endangered or threatened animal in a captive setting

The Endangered Species Act prohibits the "take" of endangered or threatened species, a term which is defined within the text as "means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[13] The terms within that list relevant to the management of captive animals are "harm" and "harass." "Harm" is defined by the United States Fish and Wildlife Service (USFWS) as "an act which actually kills or injures wildlife."[14] "Harass" is defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering."[15] In the context of captive animal management scenarios, "harassment" does not include:

"Generally accepted:

> (1) husbandry practices that meet or exceed the minimum standards for facilities and care under the Animal Welfare Act,
> (2) Breeding procedures, or
> (3) Provisions of veterinary care for confining, tranquilizing, or anesthetizing, when such practices, procedures, or provisions are not likely to result in injury to the wildlife."[16]

This exemption is based on a determination by USFWS that determining whether captive management methods count as "harassment" would put "persons holding captive specimens of a listed species in an untenable position." As Congress did not use the ESA to ban all ownership of listed species, the agency "believes that congressional intent supports the proposition that measures necessary for the proper care and maintenance of listed wildlife in captivity do not constitute 'harassment' or 'taking.'"[17] Specifically, the agency noticed that the "purpose of amending the Service's definition of 'harass' is to exclude proper animal husbandry practices that

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[12] Probable transmission of SARS-CoV-2 from an African lion to zoo employees, *medRxiv* https://www.medrxiv.org/content/10.1101/2023.01.29.23285159v1
[13] 16 USC Ch. 35 Sect. 1538, Prohibited Acts
[14] 50 CFR 17.3, Definitions
[15] *Id.*
[16] *Id.*
[17] Federal Register Volume 63, Issue 176 (September 11, 1998) https://www.govinfo.gov/app/details/FR-1998-09-11/98-24384

are not likely to result in injury from the prohibition against 'take.' Since captive animals can be subjected to improper husbandry as well as to harm and other taking activities, the Service considers it prudent to maintain such protections, consistent with Congressional intent." This means that the ESA's prohibitions extend to captive wildlife, but what qualifies as "harassment" has "a different character when applied to animal *[sic]* in captivity than when applied to animals in the wild."[18]

Plaintiffs bringing ESA lawsuits against zoological facilities and other businesses where endangered and threatened animals are held captive must prove that the facility's conduct constituted a captive "take," e.g. that the individual animals were injured or killed by the entity, or that they were harassed by being treated in a manner inconsistent with the exemptions USFWS promulgated.

It is generally not held by the courts that compliance with the provisions of the Animal Welfare Act (AWA) is enough to prove a facility did not harm or harass their animals. While in *People for the Ethical Treatment of Animals, Inc. v. Miami Seaquarium*[19] the court determined that the ESA and the AWA were complementary laws intended by Congress to regulate different aspects of "protecting animals from people" and would be brought into conflict by giving the ESA power to supersede AWA regulations, most judges presiding over ESA suits since that ruling do not agree. In *Graham v. San Antonio Zoological Society*, the court ruled that with regard to the zoo's treatment of an elephant, "if APHIS has previously found that these acts do (or do not) comply with the AWA, these findings are merely evidence of AWA compliance, and such findings do not automatically result in the defeat (or success) of [the plaintiffs'] claims." For both *Kuehl v. Sellner*[20] and *Hill v. Coggins*[21], the courts considered and assessed the relevance of the defendant's AWA compliance record. In *Kuehl*, a history of AWA non-compliance was noted and additional evidence assessed in light of the previous violations; in *Hill*, the court did not make an automatic finding for the defendants despite a near-spotless AWA compliance record regarding the animals in question.

The test utilized in the most recent ESA lawsuits to determine if a facility's animal husbandry practices qualify for the exemption from "harassment" comes from the Fourth Circuit appellate decision in *Hill.* The appellate court determined that "generally accepted" practices and practices that "meet or exceed Animal Welfare Act standards" should be considered individual criteria, rather than a single bar to be met. The description was remanded back to the district court for re-analysis as a two-part test: did the zoo's actions meet or exceed AWA standards, and were those

[18] *People for the Ethical Treatment of Animals, Inc. v. Miami Seaquarium and Festival Fun Parks, LLC, d/b/a Palace Entertainment.* 2 1:15-cv-22692-UU (2016)
[19] *Id.*
[20] *Kuehl v. Sellner,* 16-1624 (2018)
[21] *Hill v. Coggins,* 2:13-cv-00047-MR-DLH (2019)

practices also considered to be “generally accepted”? This test is inherently flawed, as nothing within the USFWS regulations indicates what entity has the authority to dictate when a practice is “generally accepted”; however, unless the Fourth Circuit’s interpretation is overturned, this appears to be the way courts have decided to assess take liability for “harassment” in captive settings.

The final ruling in *Hill* determined that the defendants had neither harmed nor harassed the bears at issue, in large part because the plaintiffs had failed to provide evidence that the opinions of their expert witnesses reflected “generally accepted” industry standards. In an ongoing suit, *Animal Legal Defense Fund v. Olympic Game Farm (*hereafter*: Olympic Game Farm)*, the plaintiff has been denied summary judgment for multiple allegations of “harassment” of endangered species within the defendant’s collection due to the difficulty in proving the “general acceptance” of any set of standards or guidance external to AWA regulation.

Infectious disease risk as harassment according to ESA provisions

The scope of the Endangered Species Act and its jurisdiction over captive animals has expanded during the last decade. Animal advocacy groups, such as the People for the Ethical Treatment of Animals (PETA) and the Animal Legal Defense Fund (ALDF), utilize the citizen lawsuit provision within the act to address perceived violations of the ESA by zoological facilities; the outcomes of these lawsuits have the potential to change the jurisdiction of the law based on judges’ interpretation of the case. While judges are not obligated to follow precedents set by rulings from lower courts or other districts, they can and frequently do take them into consideration as “persuasive authority” when considering their own rulings. This expansion of the scope of existing laws via court rulings is colloquially known as using bench precedent, and is currently a major strategy employed by advocacy groups looking to hold zoological facilities more accountable for their practices than is possible under the Animal Welfare Act.

Two recent ESA lawsuits have resulted in rulings that categorized exposed risk of disease as an unauthorized take of endangered captive animals. In *PETA v. Tri-State Zoological Park of W. Md* (hereafter: *Tri-State*) in 2019, the court found that keeping lemurs in conditions which increased their vulnerability to disease constitutes “harassment” under the ESA.[22] This opinion was based, in part, on the Animal Welfare Act requirement that “each exhibitor shall establish and maintain

[22] *People for the Ethical Treatment of Animals, Inc. v. Tri-State Zoological Park of W. Md*, 8:17-cv-02148-PX (2019)

programs of adequate veterinary care that include...the use of appropriate methods to prevent, control, diagnose, and treat diseases and injuries..."[23] In 2020, the ruling for *PETA v. Jeffrey L. Lowe* (hereafter: *Lowe*) expanded upon this decision, determining that Lowe's failure to follow "generally accepted" industry risk mitigation practices for SARS-CoV-2 with regard to four lion cubs constituted harassment above and beyond the captive management exception, and therefore was an unauthorized take of those animals.[24] Neither ruling was predicated on the requirement that the animals involved were actually exposed to an infectious disease or became sick; it was determined in both lawsuits that just the increased vulnerability or exposure to disease was an unacceptable level of harm and/or harassment.[25]

The ruling in *Tri-State* was very clear about what was considered an ESA violation: the keeping of lemurs in unsanitary conditions that impacted their immune systems in a way which increased their risk of disease. While that ruling seems to have been focused on intrinsic risk[26] (e.g., lowered immune function), the precedent appears to have been interpreted in *Lowe* to also cover extrinsic risk (increased risk of exposure due to external circumstances). In addition, the findings in *PETA v. Lowe* also determined the circumstances involved were ESA violations because of "failing to follow industry guidance regarding personal protective equipment for members of the public and staff, ... regarding public and staff access to these lions, ... regarding public crowding of these lions, and failing to have adequate staff monitoring of these lions' enclosures, exposing all four lions to a high degree of infection risk from SARS-CoV-2."

The industry guidance put forth as "generally accepted" regarding SARS-CoV-2 risk mitigation can be found in the supplemental expert report from Jay Pratte, who at that time was a manager at Omaha's Henry Doorly Zoo and Aquarium, and is now the director of the Miller Park Zoo. Pratte served as an expert witness for PETA in both their ESA lawsuit against Lowe and the previous litigation against Tri-State. In the report, Pratte communicated his belief that Lowe did not "appear

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[23] Animal Welfare Act and Animal Welfare Regulations, *USDA Animal Care*, as cited in *PETA v. Tri-State*

[24] *People for the Ethical Treatment of Animals, Inc. v. Jeffrey L. Lowe*,5:21-0671-F (2022)

"SARS-CoV-2, the virus that causes COVID-19 in humans, poses a fatal risk to lions."

"Lowe harassed all four lions within the meaning of the ESA and its implementing regulations by (...) exposing all four lions to a high degree of infection risk from SARS-CoV-2."

[25] *Id.* One lion cub did become sick with multiple unknown respiratory infections: this was listed as a separate ESA violation.

"Lowe's failures to protect the lions from potential infection harmed Nala within the meaning of the ESA and its implementing regulations as she developed multiple painful respiratory infections in June 2020."

[26] *People for the Ethical Treatment of Animals, Inc. v. Tri-State Zoological Park of W. Md*, 8:17-cv-02148-PX (2019)

"Defendants subjected Bandit and Alfredo to an onslaught of environmental assaults that harassed and harmed them. (...) Exposure to such temperature visits harm on lemurs' health, including hypotension, suppressed appetite, and increased vulnerability to disease. (...) The lemurs' isolating, barren, freezing, dirty, stress-inducing enclosure essentially stripped Bandit and Alfredo of almost of all *[sic]* their natural behaviors, creating a high likelihood of both psychological and physical injury."

to take the ongoing pandemic stemming from the SARS-CoV2-virus *[sic]* sufficiently seriously, and has not timely or adequately implemented protective measures in accordance with generally accepted husbandry standards." Pratte's report references two sets of guidance regarding large cats and SARS-CoV-2: an advisory note from the United States Department of Agriculture Animal and Plant Health Inspection Service[27] (USDA APHIS) in May 2020, and a joint news release from the Association of Zoos and Aquariums (AZA) and the American Association of Zoo Veterinarians (AAZV) in April 2020.[28] The USDA had advised at that time that "all keepers working with [susceptible felids] should don extra protective equipment and practice physical distancing when possible." They also provided guidance that the public should be kept at least six feet from all nondomestic cats, required to wear masks when near their exhibits, and that hands-on encounters should be suspended. According to Pratte's summary of the AZA/AAZV news release, AZA-accredited and -certified facilities had at that time been "advised to implement a number of measures, including "limit[ing] access to felid housing areas to necessary personnel" as well as "a higher degree of Personal Protective Equipment (PPE) for animal care staff who work with any cat species, including wear[ing] coveralls, surgical masks, eye protection (e.g., face shields or goggles) and gloves when working in any area where cats are present."[29] The guidance provided by AZA also encouraged staff to practice social distancing from felids whenever possible.

Lowe's practices prior to June 2020, in contrast to guidance put forth by AZA and the USDA, did not involve requiring staff or guests to wear masks or gloves around felids.[30] Crowds of guests were allowed within six feet of adult big cat exhibits, and Lowe continued to proctor encounters where large groups of the public handled big cat cubs directly without PPE, temperature-testing, or sanitization procedures.[31] Pratte testified that these choices fell "far short of generally accepted husbandry standards" regarding SARS-CoV-2. As of August 2020, he added, "at numerous reputable facilities, staff contact with Big Cats *[sic]* has been largely eliminated, with staff required to don masks and gloves while performing tasks such as food preparation and only essential interactions, which are conducted at the maximum distance possible." With regard to the public crowding and interaction programs, Pratte noted that it "would be unthinkable, during present conditions, to allow members of the public close access to animals even if such access does not include direct contact." This testimony, alongside the material evidence provided, contributed to a finding that Lowe had violated the ESA and harmed and harassed the lion cubs by not implementing what were "generally accepted" to be appropriate procedures that would protect them from the risk of exposure to SARS-CoV-2.

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[27] USDA Advisory Note: Limiting close contact between members of the public and nondomestic cats. *USDA APHIS* (May 14, 2020)
[28] AZA and AAZV Statement on COVID-19 Positive Tiger in New York. (April 6, 2020) https://www.aza.org/aza-news-releases/posts/aza-and-aazv-statement-on-covid-19-positive-tiger-in-new-york
[29] Supplement to the Expert Report of Jay Pratte, 5:21-0671-F (August 25, 2020)
[30] Deposition of Jeff Lowe,5:21-0671-F (August 12, 2020)
[31] Supplement to the Expert Report of Jay Pratte, 5:21-0671-F (August 25, 2020)

Future ESA impacts unclear given the range of existing SARS-CoV-2 guidance

While the state of emergency for the human Covid-19 pandemic will be ending in May 2023, captive animals will always be at risk of contracting zoonoses due to their frequent and regular proximity to people. The SARS-CoV-2 virus is now endemic in the United States, meaning there will always be some level of the virus circulating within the population. While the United States is ending mandatory infectious disease mitigation efforts for people and moving to an individualistic framework regarding risk assessment and prevention, captive animals do not have the same freedom of choice regarding their exposure to potentially sick facility staff and visitors. Both the mandatory regulatory standards (USDA) and voluntary accreditation frameworks (AZA, ZAA, GFAS) require zoological facilities to implement appropriate policies and procedures to mitigate and prevent zoonotic disease risks for their collections. It is possible that any facility which ends risk mitigation efforts such as masking and distancing for staff and visitors that are in proximity to susceptible species may be considered in violation of the ESA.

If violations of this type were to be assessed by the courts in the future, it is unclear what published guidance a facility's SARS-CoV-2 protocols would be assessed against. The USDA APHIS and AZA/AAZV guidance was used for the *Lowe* ruling, but it cannot be guaranteed that those documents will continue to be considered "generally accepted" guidance for the mitigation of SARS-CoV-2. The filings that included Pratte's affidavits in *Lowe* were submitted to the court in August 2020 — a point in time when very little was known about the virus, and there had not been time for more formal protocols to have been developed and promulgated. More than three years into the existence of the SARS-CoV-2 virus, scientific understanding of the virus has increased drastically, and multiple alternate sets of guidance exist that reflect various stages of knowledge and subsequently recommend different levels of preventative action.

While the AZA has not made public any updated guidance since what was included in the April 2020 news release, there may be newer guidance that has been disseminated only internally. The AAZV does not have any additional public-facing guidance, and the 2022 version of their Infectious Disease Manual includes an entry only for a generic coronavirus.[32] The Felid Taxon Advisory Group (Felid TAG), a group associated with the AZA but not directly run by the organization, published

[32] Infectious Disease Manual: Infectious Diseases of Concern to Captive and Free Ranging Wildlife in North America. *American Association of Zoo Veterinarians Animal Health and Welfare Committee* (2020) https://www.aazv.org/resource/resmgr/idm/idm_updated_april_2020.pdf

their own updated guidance in October 2021.[33] In November 2021, the Zoo and Aquarium All Hazards Partnership (ZAHP) published an infection prevention and control assessment tool in collaboration with the One Health Federal Interagency COVID-19 Coordination Group.[34]

Of these resources, the ZAHP/One Health guidance is the most up-to-date regarding the transmission vectors for SARS-CoV-2, and the most stringent about protecting susceptible animal species. Their guidance includes prohibitions against staff currently testing positive for COVID-19 entering the facility at all, as well as recommending high-efficiency respiratory protection such as N-95 respirators when anyone is working in proximity with susceptible taxa. In contrast, the current Felid TAG guidance suggests that higher-efficacy masks than cloth may be needed only when "overall risk is high." While that document recommends staff undergo symptom screening to "[limit] potential for human infection," it does not address whether staff sick with COVID-19 should be allowed to work around non-domestic felids. Both the ZAHP/One Health guidance and the Felid TAG guidance recommend vaccination for susceptible species and staff; however, the AZA/AAZV guidance from 2020 does not, as vaccines were not yet available.

AZA standards cannot be expected to be "generally accepted" by courts

Depending on which set of guidance is identified by plaintiffs and their expert witnesses as "generally accepted" practices in any future lawsuit, a wide range of infectious disease prevention policies might be considered inadequate enough to constitute harm or harassment in accordance with the ESA's take prohibitions. While many within the zoological industry are accustomed to the brand dominance of the AZA in legislative and regulatory spaces, and therefore it can be expected that the AZA's SARS-Cov-2 guidance would be the "gold standard" to which all entities holding captive exotic animals are held, courts that have ruled recently on ESA violations not related specifically to SARS-CoV-2 have determined the exact opposite to be true.

In earlier ESA lawsuits, such as *Tri-State,* the court held that tigers, lemurs, and lions were harassed and/or harmed by the facility's husbandry practices. The ruling regarding the "take" of the tigers

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[33] Updated guidance for working around non-domestic felid species during the SARS CoV-2 pandemic, *Felid Taxon Advisory Group.* (October 29, 2021)
https://www.aazv.org/resource/resmgr/docs/Guidance_for_working_around_.pdf
[34] COVID-19 Infection Prevention and Control Assessment Tool for Captive Wildlife Facilities: Zoos, Sanctuaries, Aquaria, and Wild Animal Rehabilitation Centers. *Zoo and Aquarium All Hazards Partnership.* (November 30, 2021)
https://zahp.org/covid-19-infection-prevention-and-control-assessment-tool-for-captive-wildlife-facilities/

was supported in part by expert testimony from an AZA professional and AZA's Tiger Care Manual guidelines. The court found that the lack of sanitation of the tiger enclosure "squarely disregarded industry standards" and their construction/design of the space was "far removed" from "accepted husbandry practices." It appeared that it was going to become common practice for ESA lawsuits to be determined in part based on a comparison between the defendant's animal care practices and AZA standards or husbandry guidelines for the relevant species. ESA lawsuits addressing perceived take involving endangered big cats, such as *Olympic Game Farm*, have continued to utilize AZA documents as evidence that defendants' care of lions and tigers is inadequate and constitutes a take.

However, a precedent set during the *Hill* appeal appears to have drastically altered that approach. The original ruling in *Hill* was that the defendant was not found to have violated the ESA, as their husbandry practices met or exceeded the requirements of the Animal Welfare Act, as set forth in the captive management exemption for "harassment." The Fourth Circuit appellate court remanded the case back to the district court, instructing that they should consider not just the facility's AWA compliance, but any possible violations where the defendant's actions were outside of "generally accepted animal husbandry practices."[35] In doing as instructed, the district court noted that "there is no set of regulations or other guidance promulgated by the USFWS or USDA delineating what 'generally accepted' animal husbandry practices are with respect to *any* endangered or threatened species," and that "no 'generally accepted' animal husbandry practices have been adopted by the ordinary rule-making process or subjected to public debate." The judge opined that "there is no single source to which anyone can refer to learn what is allowed and what is prohibited. Indeed, the Plaintiffs have not identified any literature or peer-reviewed material that establishes the 'generally accepted' animal husbandry practices applicable to the treatment of threatened or endangered wildlife in captivity. Instead, the Plaintiffs rely on their experts to provide opinions as to what those 'generally accepted' practices are. As such, applying the Plaintiffs' arguments to § 17.3 as construed by the Court of Appeals, renders that section to be something of a regulatory 'head-fake.' It cites to a *[sic]* formally adopted set of regulations, but then dictates that those regulations are superseded by a higher, more stringent standard that cannot be found in the Code of Federal Regulations or anywhere else."

One of the plaintiff's expert witnesses testified that "the AZA Accreditation Standards form the basis for generally accepted practices in the field of zoology." According to him, it is the "generally held opinion in the captive animal community" that the AZA Accreditation Standards constitute generally accepted husbandry practices, and any potential ESA violations in the case should be assessed against their requirements. However, when cross-examined, he could not "identify any

[35] *Hill v. Coggins*, 867 F.3d 499 (4th Cir. 2017)

literature or peer-reviewed article to support that proposition" other than "statements to this effect advertised by the AZA itself."

The court noted that, of the total number of exhibitors in the United States, only a small minority are accredited by the AZA, and that accredited facilities are "members in an elite voluntary organization." "By [AZA's] own definition," the opinion said, "such standards are *not* 'generally accepted.'" Additionally, the court indicated that "even if the AZA Accreditation Standards could be looked to as the standard for 'generally accepted' animal husbandry practices, such standards at best establish a moving target" because of the frequent updates to the accreditation standards and the continuous evolution of the larger field. The ruling concluded with the statement that, "for these reasons, the Court finds as fact and concludes as a matter of law that the AZA Accreditation Standards are not the standard of 'generally accepted' animal husbandry practices within [the relevant ESA regulations]. Rather, these standards cited by the Plaintiffs' experts represent, at most, an aspirational standard. … While [the expert witnesses] identified numerous ways in which the Zoo's animal husbandry practices failed to meet the aspirational standards set by the AZA … they have failed to demonstrate that those higher standards are 'generally accepted'" and "did not cite any learned treatise, published literature, scholarly writing or peer-reviewed material in support of their conclusion that the [defendant's] animal husbandry practices are not 'generally accepted.'"

Evidence that *Hill* set a precedent requiring plaintiffs to prove that alleged "harassment" is outside the scope of "generally accepted" practices by identifying what standards or guidance meets that qualification can be found in the progression of *Olympic Game Farm*. While litigation is still ongoing as of the time of this writing, the defendant was granted summary judgment on claims related to the size, construction, temperature, and barrenness of tiger and lion enclosures. With no evidence that the Olympic Game Farm violated the minimum standards for enclosure parameters regulated by the AWA, the court notes that the plaintiff "must therefore identify a relevant 'generally accepted' standard with which defendants arguably failed to comply." In the words of the filing: "It has not done so." The plaintiff's argument relies on the AZA Lion and Tiger Species Survival Plans to identify appropriate environmental parameters for housing each species. According to the filing, the plaintiff has not explained how standards "which are represented to be the standard of excellence to which zoos and aquariums should aspire" reflect "generally accepted" practices. The court has therefore found that the plaintiff has not raised genuine issues of material fact regarding the enclosures' adequacy for purposes of ESA litigation.

Therefore, it can not be assumed that courts will view guidance by AZA as inherently "generally accepted" for the purposes of assessing possible ESA violations in the future. However, as the AZA's current SARS-CoV-2 guidance is written in collaboration with the AAZV, it could be considered to be more "generally accepted" by zoological industry than the AZA standards. It is also possible that

USDA recommendations would be considered more "generally accepted" as they apply to all federally regulated zoological facilities; an argument could also be made for the "general acceptance" of the ZAHP/One Health guidance given the established expertise of those organizations in the zoonotic and biosecurity fields.

Lack of clarity regarding potential vs actual harm from disease under existing precedents

The ruling in *Lowe* determined that lack of appropriate risk mitigation and the possibility of SARS-CoV-2 exposure was harassment under the ESA, even without a confirmed or suspected infection. Similarly, the ruling relied upon in that case, *Kuehl v Sellner*, determined that substandard care resulting in an increased risk of disease stemming from substandard care was harassment. These decisions do not align with the ruling in *Hill*, where the court noted that the possibility that "harm may potentially occur if [the practice at issue] is continued is not sufficient to establish a 'harm' within the meaning of the regulation," citing as precedent five other ESA lawsuits. Future courts will have the freedom to choose which, if any, of these precedents to consider when ruling on cases dealing with similar issues; therefore any argument relying on the fact that animals have not *yet* gotten sick from SARS-CoV-2 in absence of risk mitigation procedures cannot be guaranteed to be successful.

Impact / Consequences of ESA lawsuits

The consequences for a facility losing an ESA lawsuit are more severe than just civil and/or financial penalties. In addition to the negative reputational impact for the defendant of being sued for allegedly violating a federal law by harming collection animals, plaintiffs also have the right to request specific types of injunctive relief if their claims are found to be true. As ESA litigation has become more common to redress perceived wrongs done to captive animals, the types of relief requested by plaintiffs have also expanded. The earliest captive animal ESA lawsuits sought relief involving suspending businesses' ability to operate,[36] restraining orders preventing the movement of endangered animals,[37] or requiring the surrender of endangered animals to an alternate USDA-licensed facility.[38] In the last ten years, the types of relief requested have shifted: plaintiffs

[36] *Humane Society of the United States v. Babbitt*, 93-5339 (1995)
[37] *In Defense of Animals v. Cleveland Metroparks Zoo,* 91CV2169 (1991)
[38] *Kuehl v. Sellner,* C14-2034 (2016)

now more frequently petition for the animals to be surrendered to an appropriate or accredited sanctuary,[39] [40] or even a specific sanctuary chosen by the plaintiffs.[41] [42] In two of the most egregious recent cases, the defendants have been criminally prosecuted for their offenses.[43] [44] Other penalties enforced by courts as a result of ESA lawsuits have also involved prohibiting defendants from holding a USDA license[45] or banning the defendant from owning exotic or wild species.[46] Requested relief in ongoing cases includes the surrender of all endangered animals at a facility (not just those covered by the lawsuit) to a sanctuary,[47] the surrender of all collection animals (including those not covered by the ESA) to a sanctuary,[48] [49] and/or the alteration of the whole facility to a sanctuary accredited by an organization of the plaintiff's choice.[50]

Additional concerns: relevance to management of other zoonotic pathogens

While SARS-CoV-2 was the zoonotic disease risk during the *PETA v Lowe* court case, it is important to recognize that the ESA violations identified by the courts in that lawsuit and in *PETA v Tri-State* were on the topic of increased or unmitigated disease risk more generally. This new scope of the ESA captive take provision may be relevant to other circulating zoonotic pathogens; for instance, the H5N1 strain of avian influenza has recently proven to be fatal to tigers,[51] mustelids,[52]and some marine mammal species.[53]

[39] *People for the Ethical Treatment of Animals, Inc. v. Tri-State Zoological Park of W. Md*, 8:17-cv-02148-PX (2019)
[40] *Hill v. Coggins,* 2:13-cv-00047-MR-DLH (2019)
[41] *Graham v. San Antonio Zoological Society*, SA–15–CV–1054–XR (2017)
[42] *Rowley v. City of New Bedford*, 17-11809-WGY (2019)
[43] *United States of America v. Joseph Maldonado-Passage,* 5:18-cr-00227-SLP (2018)
[44] *Commonwealth of Virginia v. Bhagavan Antle* (ongoing)
[45] *People for the Ethical Treatment of Animals, Inc. v. Jeffrey L. Lowe*,5:21-0671-F (2022)
[46] *People for the Ethical Treatment of Animals, Inc. v. Wildlife in Need,* 4:17-cv-00186-RLY-DML (2020)
[47] *Animal Legal Defense Fund v. National Foundation for Rescued Animals D/B/A Tiger Creek Animal Sanctuary*, 6:22-cv-00097-JDK (ongoing)
[48] *Animal Legal Defense Fund v. Olympic Game Farm, Inc.,* C18-6025RSL (ongoing)
[49] *People for the Ethical Treatment of Animals, Inc. v. Waccatee Zoological Farm*, 4:22-cv-01337 (ongoing)
[50] *Animal Legal Defense Fund v. Olympic Game Farm, Inc.,* C18-6025RSL (ongoing)
[51] Tiger fatality from eating bird flu
[52] Mink bird flu outbreak
[53] Sea lion outbreak