February 1, 2024

Via Certified and Electronic Mail

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RE: Urgent Request for Action to Address Ongoing Risk of Zoonotic Disease Spread from Commercial Mink Fur Farms; Highly Pathogenic Avian Influenza

Dear Governor Kotek and Respected Agency Administrators,

We write to you on behalf of the Center for Biological Diversity, Humane Society of the United States, Animal Welfare Institute, and Animal Legal Defense Fund regarding the urgent need to respond to threats posed to public health and wildlife by commercial mink fur farms in the state of Oregon.

Over the past three years, the international scientific community has significantly expanded its understanding about the severity of risks that commercial mink fur farming operations pose to human health and wild animal populations. This crystallization of scientific understanding has its roots in the COVID-19 pandemic, where numerous outbreaks of SARS-CoV-2 (the animal virus that causes COVID-19 in humans) occurred in mink farms, between farmed mink and farm workers (known as “bidirectional transmission”), and between farmed mink and wild mink and other vulnerable wild animal populations.¹ In Oregon alone, where American mink² are a native species, COVID-19 spread in numerous commercial mink fur farming operations, leading to escapes into the wild of mink infected with SARS-CoV-2.³

² Domesticated American mink are the most farmed mink species.
³ Oregon Department of Agriculture, Tests at an Oregon Mink Farm Show SARS-CoV-2 Still Present with No Virus Mutations; Testing, Surveillance, and Trapping Continues (Jan. 12, 2021), https://content.govdelivery.com/accounts/ORODA/bulletins/2b626a7.
The vivid account of zoonotic disease risk and spread among farmed mink populations, workers, and wild populations during the COVID-19 pandemic⁴ now appears to be replicating through the devastating expansion of highly pathogenic avian influenza (“HPAI”) across avian and mammal populations, including farmed mink populations.⁵ Indeed, given the biological aptitude for commercially-raised mink to act as “mixing vessels” that can recombine respiratory viruses into variants that are more transmissible to humans, along with the proximity of commercial mink farms to significant HPAI outbreak locations in Oregon, the risk that these operations pose to hastening additional, preventable disease spread is undeniable. In November 2023, for example, nearly 800,000 chickens were depopulated (through a controversial method known as ventilation shutdown plus heat, or VSD+) following the spread of HPAI in two commercial poultry operations in the Willamette Valley; M&M Ruef, Inc. — the largest mink fur farm in Oregon — is co-located in Marion County, the county where one of these two significant poultry outbreaks occurred.⁶

Oregon cannot keep tempting fate by ignoring the disproportionately large risks that this small industry poses to public health and wildlife populations.

Given the significant rate of HPAI spread among avian populations in and around Oregon, the growing risk of spread in mammal populations, and the pattern of zoonotic disease transmission and mutation inherent to this industry, we write today to ask that your administration take action to immediately start phasing out commercial mink fur farming in Oregon. One way to accomplish this is for Governor Kotek to declare a state of emergency to address the spread of HPAI in Oregon under ORS 401.

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In addition, it is imperative that Oregon agencies implement proactive measures to improve surveillance, the dissemination of data between agencies and the public, and the prevention of disease within and from commercial mink fur farms. Currently, despite the low number of these operations in Oregon — and thus the limited amount of governmental resources that would be needed for meaningful oversight — adequate measures are not currently in place to proactively prevent risks, including from the spread of infectious diseases from escaped mink, or to ensure adequate, preventative veterinary care is provided to farmed mink. We therefore recommend the following changes be made to strengthen the current system:

1. Implement regular inspections, improved reporting, and preventative operational management approaches to prevent the spread of zoonotic disease. To verify that commercial mink fur farming operations are following proper environmental, biosecurity, animal welfare, and public health standards, these guidelines should include, at a minimum:
   a. Facilities must verify that they are or will be constructed and maintained to minimize escapes of farmed minks into the wild;
   b. Facilities must verify that they maintain adequate security and safety procedures to minimize the possibility of escape;
   c. Facilities must provide records detailing the numbers of escaped mink and the dates of escapes, mortalities of confined mink and the causes of those mortalities, and any recovery of escaped mink;
   d. Facilities must verify that adequate veterinary care is regularly provided to all confined animals, including for the purpose of identifying and minimizing the spread of disease; and
   e. Facilities must certify that the operation has a good reputation for care of animals and compliance with applicable laws. Oregon should develop a verifiable definition for good reputation for use in implementing this provision.
2. Require regular mandatory testing for infectious diseases including, but not limited to, SARS-CoV-2 and avian influenza in all Oregon mink farms.
3. Require improved annual collection and public dissemination of information from commercial mink fur farms, including, but not limited to, the number of animals raised, the number of pelts produced per operation, the methods of mink slaughter employed, the methods of waste and carcass disposal utilized, and information regarding the transportation and fate of mink pelts produced.
4. Establish a protocol for rapidly notifying the public when disease outbreaks with the potential for zoonotic disease spread occur at mink farms, including of SARS-CoV-2, avian influenza, and other infectious diseases that can pose a public health risk.

Commercial mink fur farms in Oregon pose a risk to the health of Oregonians, wildlife, and the environment. We urge the Kotek administration to work with requestors to take the common-sense actions detailed above and reduce the preventable disease risks posed by these operations.

The following comments summarize the latest research supporting our recommendations:
I. Mink fur farms pose a serious public health risk.

A growing body of research demonstrates that commercial mink fur farms pose a threat to public health due to their potential for spreading disease. The undisputed link between mink and the mutation and spread of COVID-19 has been well documented worldwide. Captive mink raised for their fur are among the most vulnerable non-human animals susceptible to catching and spreading the virus, both because of the confined, stressful conditions in which they are raised, which compromises their immune systems and facilitates viral transmission,\(^7\) and because of the human-like structure of their angiotensin-converting enzyme 2 ("ACE2") receptors, which allows the SARS-CoV-2 spike protein to effectively bind to and enter (i.e., infect) their cells.\(^8\) Since the beginning of the pandemic, more than 20,000 captive mink on at least 18 U.S. mink farms — including in Oregon — have died as a result of SARS-CoV-2 spread,\(^9\) while millions more have either died from the disease or been killed to prevent its spread in more than 400 fur farms across Europe.\(^10\)

These losses have reduced an industry already in decline.\(^11\) In Oregon, there appear to be just four active mink fur farms, based on state permitting records.\(^12\) According to the U.S. Department of Agriculture ("USDA"), Oregon fur farms produced 75,520 mink fur pelts in 2022 — a 41% drop from 2021 levels and a 71% drop from pre-pandemic levels in 2019. Nationally, mink pelt production has dramatically declined each year, with just 1.33 million pelts in 2022 (down 15% from 2021); and the number of female mink bred to produce kits dropped 31% to 245,000.

While outbreaks of SARS-CoV-2 on mink fur farms have been devastating, they have not been surprising. Operating guidelines developed by the Fur Commission USA, an association that represents U.S. mink farmers, warn that disease transmission is a risk inherent to mink farming:

Due to industry characteristics, mink farms have been expanding in size and in many cases there are multiple farms in close proximity to each other. This high density of

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\(^7\) See, e.g., Jonathan Anomaly, What’s Wrong with Factory Farming?, 8 PUB. HEALTH ETHICS 246 (2015); Jeanette I. Webster Marketon, Stress Hormones and Immune Function, 252 Cellular Immunology 16 (2008).

\(^8\) See, e.g., Yulong Wei et al., Predicting Mammalian Species at Risk of Being Infected by SARS-CoV-2 from an ACE2 Perspective, SCI. REPORTS. (Jan. 2021) (Exh. E).


\(^10\) Fenollar et al. (2021) at 2, 6 (Exh. F).


\(^12\) These operations are jointly permitted by the Oregon Departments of Agriculture and Environmental Quality.
animals increases the chance of disease transmission. Small farms are at just as much risk for disease as large farms; biosecurity concerns are everyone’s concerns.\(^\text{13}\)

Farmed mink are unique not only in their susceptibility to catch SARS-CoV-2, but also in their ability to transmit it. To date, farmed mink are the only animals verified to have transmitted the virus directly to humans.\(^\text{14}\) In addition, live mink are not the only potential transmission vector found on mink farms; the virus could also be transmitted through feces, carcasses and fur, wastewater and surface water runoff, and secondarily through other animals originally infected by mink.

And it’s not just COVID-19 that poses a risk. The A(H5N1) subtype of highly pathogenic avian influenza — which has caused death in approximately half of human cases reported since 1997\(^\text{15}\) — was recorded on a mink farm for the first time in Spain in 2022. During that outbreak, the virus gained at least one mutation that favors mammal-to-mammal spread, allowing it to spread from mink to mink. Before this outbreak, the virus spread primarily through contact with infected birds, not between mammals, increasing pandemic fears among scientists.\(^\text{16}\) Now, outbreaks are being reported throughout Finland on fur farms housing mink, fox, and raccoon dogs, where the virus also appears to have mutated.\(^\text{17}\) To date, outbreaks have occurred on dozens of fur farms and more than 300,000 fur-bearing animals have been culled, with the number growing almost daily. Virologists fear that “recent rapid transmission of H5N1 HPAI in minks may result in the further evolution of the virus in mammals, thereby causing cross-species transmission to humans in the near future.”\(^\text{18}\)

As open-air environments, contact with birds and bird feces can be a common occurrence on commercial mink fur farms, increasing the risk of disease spread. Indeed, studies show that HPAI can spread from wild and commercial birds to farmed mink, often through consumption of the bird or its waste material.\(^\text{19}\) Between January 2022 and January 2024, Oregon recorded 449

\(^\text{16}\) Supra note 5.
\(^\text{17}\) Id.
\(^\text{19}\) Finnish Food Authority, The Virus Line that Circulates Especially Among Seagulls has been Confirmed as the Cause of Bird Flu Infections in Fur Animals (July 2023), https://www.ruokavirasto.fi/elaimet/elainten-terveys-ja-elaintaudit/elaintaudit/ajankohtaista-elintaudeista/turkiselainten-lintuinfluenssatartuntojen-aiheuttajaksi-on-varmistunut-erityisesti-lokkien-keskuudessa-kiertava-viruslinja/.
cases of HPAI in wild birds — the fourth most of any state.\textsuperscript{20} And According to the Centers for Disease Control and Prevention, there have been more than 1,000 HPAI outbreaks in U.S. domesticated (backyard and commercial) bird operations since January 2022, with 37 occurring in Oregon alone.\textsuperscript{21} Six such HPAI outbreaks have been reported in Linn and Marion counties, where mink farms remain operational, including significant commercial outbreaks in November 2023.\textsuperscript{22}

In commercial mink fur farms, the symptoms of animals infected with HPAI can vary from severe to very mild; some can even be asymptomatic.\textsuperscript{23} As such, proactive disease testing is necessary even when animals show no symptoms.

Instructively, in Finland required disease testing on fur farms has proven essential for detecting HPAI and its rapid spread. Other jurisdictions, such as British Columbia, have neutralized the public health hazard posed by commercial mink farms by banning mink fur farming altogether.\textsuperscript{24} Lithuania also became the twentieth European country to ban fur farms in September 2023.\textsuperscript{25} Additional countries are currently considering proposals to do the same, including Sweden, Poland, Bulgaria, Romania, and, unsurprisingly, Finland. Despite the prevalence of this disease in Oregon and the potential for animals on mink farms to contract and amplify it, there remains no mandatory proactive testing to monitor for HPAI on fur farms in the state.

Prolonged replication of the HPAI virus in commercial mink fur farms might lead to variants that could more easily spread to and between humans.\textsuperscript{26} Since the beginning of 2022, there have been 19 documented human cases of HPAI A(H5N1), with over half resulting in severe illness and

\textsuperscript{22} Kyle Odegard, Four New Avian Flu Outbreaks in Oregon; 790,000 birds euthanized, Capital Press (Nov. 20, 2023) https://www.capitalpress.com/ag_sectors/livestock/four-avian-flu-outbreaks-in-oregon-790-000-birds-euthanized/article_5ed87572-85a7-11ee-b89f-f7cca03499d0.html.
\textsuperscript{26} Supra note 1.
over a quarter in death; this strain of influenza has had a cumulative human mortality rate of greater than 50 percent since 1997.\textsuperscript{27}

II. Fur farms are harmful to Oregon wildlife.

Mink’s ability to contract diseases, transmit them to other mammals, and escape mink fur farms mean that these operations pose a persistent threat to Oregon’s wildlife. When escaped animals expose themselves to wild populations, including wild American minks, they can introduce novel diseases to furbearers and other susceptible wildlife — potentially including sensitive populations.\textsuperscript{28} Mink fur farms also emit pathogens in their waste runoff, which can transmit diseases to exposed wildlife.

Animals that live on or near Oregon mink fur operations may be vulnerable to mink-borne diseases. Cats,\textsuperscript{29} bats,\textsuperscript{30} and deer mice have all been shown to be susceptible to SARS-CoV-2.\textsuperscript{31} Studies show that HPAI has been shown to have a “remarkable ability to infect” mammal species, particularly carnivores like mink and their relatives.\textsuperscript{32} Oregon is home to several mustelid species that could be vulnerable to mink diseases due to their genetic similarity. These include imperiled species such as Pacific fishers (Pekania pennanti, Oregon Conservation Strategy species & federally endangered in the Southern Sierra Nevada), wolverines (Gulo gulo, OCS species & federally threatened), and Humboldt martens (Martes caurina humboldtiensis, a federally threatened subspecies of the American marten (Martes caurina)), and other mustelids including ermines (Mustela erminea), long-tailed weasels (Mustela frenata), American badgers (Taxidea taxus), and river otters (Lutra canadensis). Other potentially vulnerable animals include mink predators like foxes, coyotes, wolves, bobcats, owls, hawks, and eagles, and prey species like frogs, water birds, mice, rabbits, and muskrats. Of the nine cases of HPAI detected in Oregon mammals by USDA from December 2022 to January 2024, all have been carnivores: one mustelid (American marten), seven closely related musteloids (six skunks and a raccoon), and


\textsuperscript{28} See generally Center for Biological Diversity, Petition Before the Oregon Department of Fish and Wildlife to Initiate Rulemaking to Amend OAR 635-056-0050 to Add Mink to the Prohibited Species List (Jan. 15, 2021), https://www.biologicaldiversity.org/programs/environmental_health/pdfs/2021-1-15_OR-Mink-Prohibited-Species-Petition.pdf.

\textsuperscript{29} Jianzhong Shi et al., Susceptibility of Ferrets, Cats, Dogs, and Other Domesticated Animals to SARS-CoV-2, 368 SCI. 1016, 1019 (2020).


\textsuperscript{31} Anna Fagre et al., SARS-CoV-2 Infection, Neuropathogenesis and Transmission Among Deer Mice: Implications for Spillback to New World Rodents, PLOS PATHOGENS, at 2 (May 2021)

\textsuperscript{32} Kaplan Bryan and Webby Richard, The Avian and Mammalian Host Range of Highly Pathogenic Avian H5N1 Influenza, Virus Res. (Dec. 5 2013) (Exh. I).
one mink predator (red fox). At least one federally endangered Pacific fisher has contracted the disease as well. Furthermore, HPAI was detected in marine mammals on the West Coast for the first time in September 2023; with one mink fur farm operating in Oregon’s coastal Clatsop County, this creates yet another potential exposure pathway.

Impacts of HPAI on wildlife are potentially severe. While the symptoms can vary widely from animal to animal, HPAI sometimes causes mass mortality in mammals, such as an unusual mortality event among New England seals in 2022, and thousands of sea lions dying in Peru and Chile in 2023.

The tendencies of viruses like SARS-CoV-2 and HPAI to reproduce rapidly within commercial mink fur farms and then potentially cross species boundaries are hazards to Oregon wildlife, just as they are to Oregonians. Until commercial mink fur farms are phased out — or at the very least, properly monitored — they will harbor the potential to produce new, ever-evolving strains of dangerous respiratory viruses, increasingly threatening the health of animals across Oregon.

III. Fur farms harm the Oregon environment.

Fur farms contaminate soil and waterways with waste runoff from animals, producing long-term damage to the environment. According to a recently published report by carbon footprint experts, the environmental impacts of fur production significantly exceed those of other materials used in fashion, including cotton, polyester, and acrylic. Fur production contributes significantly to high levels of greenhouse gas emissions as well as water consumption. Water consumption for fur production is 104 times higher than acrylic, 91 times higher than polyester and five times higher than cotton.

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34 Id.


38 Id.
CONCLUSION

Commercial mink fur farms are bad for Oregon. According to the One Health model, human, animal, and ecosystem health are inextricably linked. Because the risks posed by commercial mink fur farms to wildlife and public health are serious and urgent, Oregon must phase out commercial mink fur farming, a known biosecurity risk, to protect our health, wildlife, economy, and security. In the interim, Oregon should strengthen its risk management and oversight of this industry. We look forward to working with the Kotek administration to implement measures that will keep Oregon safe from the threats posed by these operations.

Thank you for your consideration. We are happy to make ourselves available for any questions regarding these recommendations. Please direct all communications to Hannah Connor at hconnor@biologicaldiversity.org.

Sincerely,

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