

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF LOUISIANA

ATCHAFALAYA BASINKEEPER, et al.

Plaintiffs,

vs.

DEBRA HAALAND, et al.

Defendants.

Case No. 20-651-BAJ-EWD

DECLARATION OF DR. RONALD M. NOWAK

I, DR. RONALD M. NOWAK, hereby declare as follows:

1. I make this declaration on my own behalf. I have personal knowledge of each of the facts stated herein, and if called as a witness, would and could competently testify thereto.
2. This Declaration is being submitted pursuant to 28 U.S.C. § 1746.
3. I am a Louisiana native and current resident of Falls Church, Virginia.
4. I am a long-time member of plaintiff Public Employees for Environmental Responsibility (PEER). I worked with PEER staff to represent my own and others' interests in the conservation of the Louisiana black bear by bringing this lawsuit. I join this lawsuit both as an individual plaintiff and as a member of PEER.
5. PEER is a non-profit, public interest organization incorporated in the District of Columbia and headquartered in Silver Spring, Maryland. Its organizational purpose focuses broadly on the environment, and includes the conservation of wildlife such as the Louisiana black bear. PEER has a nationwide group of members and supporters who are

current and former government environmental professionals (like me) as well as others concerned about protecting the environment and integrity in government.

6. I have spent much time in Louisiana and elsewhere gathering information on the Louisiana black bear. I have a strong interest in the Louisiana black bear (*Ursus americanus luteolus*). This interest is based on my years of education, training, and professional experience.
7. I am a Ph.D. biologist. I also have a B.A. in history and political science from Tulane University in New Orleans, Louisiana. I received my Ph.D. from the University of Kansas in 1973 following completion of a dissertation on the study of wolves and related animals.
8. I have authored eleven (11) books on mammals, mostly with Johns Hopkins University Press, several of which discuss the Louisiana black bear and other kinds of bears.
9. I was staff mammalogist at the Office of Endangered Species, U.S. Fish and Wildlife Service (FWS), from 1974 to 1987, during which time, as part of my duties, I conducted several surveys and produced several reports on the Louisiana black bear and other kinds of bears. It was I who first brought the precarious status of the Louisiana black bear to the attention of the FWS. From 1987 until my retirement from the Service at the end of 1997, I continued to occasionally gather and review information on various kinds of bears as part of my duties with the Office of Scientific Authority. Prior and subsequent to my regular employment by the FWS, I was contracted by the Service to do studies on wolves and cougars.
10. Over the past fifty-six (56) years, I have made numerous trips to and through Louisiana, often for the purpose of observing, learning about, and conducting research on bears,

wolves, and other wildlife of the state. I long have had a professional and personal interest in the history and conservation of the four large carnivorous mammals that were native to the state: the Louisiana black bear, red wolf, Florida panther, and jaguar. A major objective in my life's work was to confirm the existence and insure the protection and survival of all of those species, if not in Louisiana itself, then in other parts of their original ranges in the southern United States.

11. In the 1960s and 1970s I routinely interviewed and accompanied hunters, trappers, and other outdoorsmen, and visited museums and other appropriate facilities in Louisiana, Mississippi, Florida, and Texas, to attempt to observe those animals in the wild and to examine the remains of dead individuals.
12. In the 1980s, in association with my work for the FWS, I made several trips to Louisiana and Mississippi, specifically to wildlife refuges and other sites in the Tensas and Atchafalaya regions, and to museums in those states, as well as to the Smithsonian in Washington, D.C., in order to examine specimens of the Louisiana black bear and to collect information about it. I personally examined nearly all specimens of the native subspecies, *Ursus americanus luteolus*, that were available at that time, as well as very many examples of other black bear subspecies.
13. From the 1990s to the present I have continued to frequently visit Louisiana and Mississippi for recreational and academic purposes, and to travel by car, boat, and foot into current or former black bear habitat in the Atchafalaya River Basin, Florida Parishes, and Pearl River areas. For example, in April 2013, with the assistance of the FWS, I made a boat trip through the Bayou Teche National Wildlife Refuge, near Franklin, Louisiana, which was established in part to protect the bear and its habitat. I have a

particular interest in the possible presence of the bear in the vicinity of Honey Island, Mississippi, not far from my hometown of New Orleans, and make a point of driving to adjacent land on most of my visits, stopping, and getting out to look for bear sign. I also have gone through that area on a friend's boat and recently hiked land around nearby Slidell, where a native bear was killed in the 1960s. On a number of occasions in the last decade I have visited sites between New Orleans and Morgan City, stopping to examine habitat and look for bear sign. I have been making these visits about once or twice a year, and I plan to continue to do so in the future, with a visit planned in the fall of 2021. I remain hopeful of seeing living examples of the true native Louisiana subspecies, to the survival of which I have dedicated much of my professional life.

14. As noted above, I make periodic visits to parts of Louisiana that are Louisiana black bear habitat to attempt to observe and study the Louisiana black bear and its habitat. My enjoyment and ability to conduct such activity on future visits would be diminished if the subspecies were to be reduced in numbers or distribution or if it were to undergo hybridization with an alien subspecies.
15. It is particularly important to note, in the case of the Louisiana black bear, that while several threats remain that preclude a finding that the bear has recovered and should be delisted pursuant to the Endangered Species Act (ESA), I believe the most serious current threat is the hybridization of the native Louisiana black bear (subspecies *luteolus*) with an alien population of bears (subspecies *americanus*) descended from animals brought into the state from Minnesota for sport hunting purposes in the 1960s. Such hybridization will damage or destroy the genetic integrity of the native subspecies, potentially to the extent that the original Louisiana black bear that was the subject of the ESA listing will cease to

exist, thereby depriving me of any hope to observe and study the animal as it has existed since prehistoric time in my home state.

16. The FWS, as part of its faulty Recovery Plan, has actually set in motion a hybridization process that did not previously exist by translocating a substantial number of bears into the Three Rivers Complex (TRC) area between the native Louisiana bear population in the Tensas River Basin (TRB) and the alien population in the Upper Atchafalaya River Basin (UARB) descended from Minnesota *americanus* bears, thereby fostering interbreeding of the two and promoting the process that could genetically eliminate the original native subspecies. Scientific literature relied upon by the FWS in its delisting decision concludes that there was little or no exchange between the UARB (non-*luteolus*) and TRB (*luteolus*) populations prior to the FWS translocation project, pursued to satisfy the Recovery Plan's criteria of two viable and interconnected populations.
17. The FWS has relied on the connection of the TRB and UARB bears as a supposed connection of *luteolus* populations (even though one of them is not *luteolus*) to satisfy the Recovery Plan's criteria and justify delisting, and at the same time has also claimed with no evidence whatsoever that the interbreeding helps the viability and "health" of the Louisiana black bear.
18. Therefore, delisting and hybridization have been inexorably linked, and if the delisting remains in effect the genomic destruction of the native population that has already begun will continue unabated and my opportunity to observe and study the bear in its original form will continue to be severely damaged. This harm to me is both actual and imminent. A detailed genetics study, funded by the FWS, showed beyond doubt that, because of the

translocations, hybridization is occurring in the TRC.¹ The delisting will allow this process, destructive to the genomic integrity of the native Louisiana black bear, to continue. Therefore, I have suffered harm for the reasons set forth above and below. The study did not provide definitive evidence that hybridization has yet occurred within the TRB itself, but did show that a few bears from the hybridized population in the TRC had moved into the TRB.² These bears have potential of mating with native bears in the TRB. Therefore, hybridization is imminent in the TRB and consequently there is imminent harm to me personally and, as explained below, to my entire profession of mammalogy. Another scientific study funded by the FWS warned of the danger posed by the translocations,³ but was ignored by the FWS.

19. An exacerbating factor is that the FWS Post-delisting Monitoring Plan for the Louisiana Black Bear does not include commitments to continue to study the issue of hybridization/genetics, or otherwise respond to updated information pertaining to this issue. In consequence, delisting essentially serves as the final word on that threat. Without continued commitment to further investigate, notwithstanding inconclusiveness of findings at the time of delisting,⁴ there would be no means or legal basis to monitor and control the hybridization process, even if it came to be generally accepted as a threat.
20. I enjoy my once or twice a year visits to areas inhabited by Louisiana black bears. My strong professional and recreational interest in the Louisiana black bear and its habitat

¹ AR 362; 06130, 06140 (Laufenberg, J. S., and J. D. Clark. 2014. Population viability and connectivity of the Louisiana black bear (*Ursus americanus luteolus*). Open-File Report 2014–1228, U.S. Geological Survey, Reston, Virginia).

² AR 362; 06144, 06160, 06161, 06170.

³ AR 145 (Triant, D. A., R. M. Pace, and M. Stine. 2004. Abundance, genetic diversity and conservation of Louisiana black bears (*Ursus americanus luteolus*) as detected through noninvasive sampling. *Conservation Genetics* 5:647-659).

⁴ AR 654; 020073 (Final delisting rule of March 11, 2016, Federal Register 81(48):13124-13171).

dictates that I will continue to attempt to study and observe the bear in its native habitat. I intend to return to these areas in the future for continued observation. Unfortunately, the spreading of the hybridization process, encouraged and legalized by delisting, will progressively reduce or eliminate the possibility of me seeing or studying the true Louisiana black bear.

21. The 2016 delisting decision negatively affects my scientific, professional, recreational, and aesthetic interests. The delisting decision took away necessary protections for the remaining *luteolus* populations and their habitat, and allows for the continued exposure of true native *luteolus* to the risks of hybridization. While our success in this lawsuit would force the FWS to adopt and implement a valid recovery plan that protects true *luteolus* populations, status quo delisting will allow continued hybridization while also removing other protections afforded by the ESA.
22. A valid recovery plan such as would be required if this case is successful would require the FWS to enhance, protect, and connect at least one different, true *luteolus* bear population in addition to the TRB, as well as conserving critical habitat for them, to meet the FWS Louisiana black bear Recovery Plan criteria of two viable and interconnected populations. The Lower Atchafalaya River Basin population (LARB) does consist of true *luteolus*, but as the FWS admits, it is currently geographically isolated and has no exchange with the other true *lutelolus* population, the TRB. Rather than make any effort to protect this population or connect it to any other *luteolus* population, the FWS proceeded to delisting despite not making a determination that the LARB population is viable, and determined that it was not a significant part of the Louisiana black bear population necessary for its recovery. Thus, under the current delisting, even the

imminent extinction of the LARB population – the only candidate for a connecting *luteolus* population – would not lead the FWS to take action or to relist the bear.

23. I am concerned that the delisting decision has and will continue to threaten the genetic integrity of *luteolus*. As noted above, a study funded by the FWS shows that hybridization is occurring within the FWS-created TRC population, that is, between native TRB bears, translocated there artificially by the FWS, and bears that moved in from the alien UARB population. As of the time of the study, there was not yet evidence of hybridization in the TRB itself, but there was evidence that a few bears from the TRC had moved into the TRB. Therefore, the TRB population, the sole population that is both unmodified, native *luteolus*, and, by FWS standards, viable and significant, is unquestionably in imminent danger of being destroyed by hybridization. Thus, I am in imminent danger of suffering scientific, professional, recreational, and aesthetic injuries.
24. To be more specific, I am by profession a mammologist, a biologist specializing in the study of mammals. More precisely, most of my biological work has involved taxonomy, the study of differentiating kinds of mammals. My Ph.D. dissertation, a subsequent book, and a substantial number of academic papers were devoted to assessing the different species of wolves and related animals that exist and formerly existed in North America and, to some extent, around the world. The very essence of my profession, as shared with numerous colleagues, is the comparison of known, original, unaltered series of specimens of native mammals. It is critical that we have extensive collections of material representing the kinds of animals that occurred in areas prior to any disruption by modern humans. Otherwise we can never determine what was there in the first place and what should be preserved for conservation purposes. My own work has been mostly with the

bones and skins of mammals but many of my colleagues now deal with genetic samples. In either case, we cannot identify, classify, or assess the original population of an area if we only have specimens, either of actual animals or of genetic material, that have been collected subsequent to modern hybridization and interbreeding of the involved population. Now, delisting of the Louisiana black bear is allowing and stimulating that very process. The very future of my work and that of colleagues, not only those now involved in the field, but those who will come in future generations, is at stake. If delisting remains in effect, our professional functioning will be permanently and negatively affected.

25. It is true that there do exist collections of specimens (primarily skulls and skins) of Louisiana black bears taken prior to the introductions of Minnesota bears in the 1960s and the hybridization process that was initiated by the FWS translocations to the TRC in the early 2000s. These are not large collections and do not cover all areas with the substantial series needed to make thorough comparison among populations. More material would be very helpful, as might be collected through natural deaths, recovery of radio-tracked individuals that died, road kills, and illegal kills and confiscations. However, if the now ongoing hybridization process is allowed to intensify, or even if there is evidence suggesting the possibility that the process is taking place, there will be no guarantee that the collected specimens represent original *luteolus* in unaltered form, and a scientific assessment of the status of the subspecies and its relationships with other populations will be compromised. Furthermore, the existing collections of pre-1960s material do not include DNA taken directly from the hair, tissue, or blood of living animals, which is the most reliable source of genetic sampling that can be used in

molecular taxonomy. DNA can sometimes be extracted from old skins and bones, but, because of degeneration and other factors, the process is not always feasible or reliable. The TRB and LARB populations still appear to represent unaltered original *luteolus*, and therefore it is still possible to obtain samples that can be used to evaluate the subspecies and its components as they existed since prehistoric times, but that opportunity is rapidly being lost as delisting makes certain that the hybridization process will continue. Genetic/DNA studies of the TRB and LARB populations have been carried out, but new and improved molecular techniques are being developed and will allow better assessments in the future, IF the relevant populations can be appropriately relisted and protected from further hybridization.

26. For me and my mammalogical colleagues, the ability to collect and observe specimens of the native Louisiana black bear and its genetic material is adversely affected by delisting. The work of my profession is being hindered and we likely will be permanently deprived of the opportunity to assess the native Louisiana black bear and record its characteristics for future generations. New scientific methodologies, allowing better taxonomic assessment of animals, are being developed all the time. Now, such technology may never be able to be applied to studies of the original Louisiana black bear, to the lasting detriment of my profession and to anyone concerned about conservation of native wildlife.
27. With regard to professional interest in this matter, the FWS states that three independent, expert peer reviewers of the proposed delisting rule supported its conclusions.⁵ However, a reading of the reviews, suggests these reviewers were not asked to do anything more

⁵ AR 654; 020064.

than assess whether the criteria of the recovery plan had been met. They apparently were not asked to consider whether there had been true recovery in the context of original distribution and numbers. Moreover, their reviews do not discuss the taxonomic status of the UARB population, particularly regarding whether that population is not the native Louisiana black bear but is the descendant of animals introduced from Minnesota, the presence of which might jeopardize the genetic integrity of the native populations. I would not think the reviewers were even given adequate information about that issue. The proposed rule, unlike the final rule, treated the UARB population as if it were just another population of Louisiana *luteolus*, and it is unlikely the peer reviewers would have known there were authoritative doubts on the matter.

28. Of particular significance is that one of the peer reviewers, David L. Garshelis, is co-chair of the International Union for Conservation of Nature (IUCN) Bear Specialist Group and his comment specifically noted that he is senior author of a new and revised account of the status of the American black bear for the IUCN *Red List*. The final version of that account⁶ did not appear until after the comment of Garshelis had been submitted and apparently not until after he had further studied the situation. The new IUCN account notes the "irony" that the translocations to the TRC had "linked a population that was believed to be native Louisiana black bears with a population that had previously been established by translocating *U. a. americanus* bears from Minnesota (1964–1967)" and had thus "reduced the purity" of the native genetic stock. It is also significant that Garshelis is a co-author of a new genetic study, which concludes: "the contemporary

⁶ Garshelis, D. L., B. K. Scheick, D. L. Doan-Crider, J. J. Beecham, and M. E. Obbard. 2016. *Ursus americanus*. The IUCN Red List of Threatened Species 2016: e.T41687A114251609. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T41687A45034604.en>

Upper Atchafalaya population is likely the product of the historical translocated Minnesota bears."⁷ And it may be relevant that this new paper was co-authored by both Laufenberg and Clark, who had authored the study that the FWS said initiated work on the delisting proposal, that was the document used most extensively in developing the delisting (cited 140 times in the final rule), and that the final rule termed “. . . the best available science . . . and . . . the currently most advanced or sophisticated analyses for the Louisiana black bear.”⁸ The new paper also acknowledges a review by F. T. van Manen, another reviewer of the delisting proposal. Hence, one, possibly two, of the three peer reviewers said by the FWS to support its conclusions, now understand: (1) that one (UARB) of the two groups of bears required to be a viable population of native *luteolus*, in order to meet criteria for recovery, is not *luteolus*; and (2) that the translocations to the TRC will potentially reduce the genetic purity of the sole population (TRB) that is native *luteolus* and viable.

29. There is a distinct possibility that the hybridization process between the TRB and UARB/TRC populations implemented by the FWS to meet the Recovery Plan criteria, and that now is being fostered through the delisted status of the involved bears, will not only eliminate native *luteolus* as a genetic entity but will adversely affect all bears within Louisiana, further damaging any chance for my colleagues and I to appreciate and assess natural wildlife in the state. Keep in mind that *luteolus* is a subtropical subspecies, but the kind of bear brought from Minnesota in the 1960s was part of a population connected to stock that occurred across the far north, a very different environment. The FWS claimed

⁷ AR 659; 020152 (Murphy, S. M., J. S. Laufenberg, J. D. Clark, M. Davidson, J. L. Belant, and D. L. Garshelis. 2018. Genetic diversity, effective population size, and structure among black bear populations in the Lower Mississippi Alluvial Valley, USA. Conservation Genetics. <https://doi.org/10.1007/s10592-018-1075-6>).

⁸ AR 654; 020067, 020069.

that interbreeding of the two distinct subspecies “benefits the Louisiana black bear and has improved its population health. This assertion is supported by our peer reviewers.”⁹ However, no actual evidence of such is offered in the final listing rule or in the peer reviews on the proposed rule. In contrast, there is considerable evidence that the opposite may be true, because the UARB population is not thriving in Louisiana, and if its genes are spread to native bears, the latter may actually be weakened.

30. According to data right in the final delisting rule,¹⁰ the UARB population is the smallest of the three populations of bears that existed in Louisiana at the time of listing (1992). With about 69 bears it is less than half the size of the LARB population (164 bears), for which FWS did not determine viability to support the delisting, and which FWS claimed is not a significant population for the survival of the species. Following listing, the LARB and TRB populations responded well to protection and careful management, growing at respective annual rates of 8 and 9 percent through 2012. However, the UARB population grew at an annual rate of just 3.6 percent. It now is not even as large as either the recently established western Mississippi population (90 bears) or the TRC population (73 bears), which was created by importing *luteolus* bears from the TRB).¹¹ There is some evidence suggesting the UARB population might no longer be sufficiently viable to maintain itself over the 100-year period the FWS claimed was needed to support delisting.¹²

31. And yet this seemingly weak population is being encouraged, through delisting, to interbreed with and spread its genetic material to the native Louisiana black bears. This

⁹ AR 654; 020073.

¹⁰ AR 654; 020053-020059, 020095.

¹¹ Murphy, S. M. 2016. Density and abundance of the reintroduced Three Rivers Complex population of Louisiana black bears five years after the founder event. Louisiana Department of Wildlife & Fisheries Final Technical Report.

¹² Clark, J. D. 2020 (February 4). Louisiana Black Bear Post-delisting Monitoring Report. Draft received by request from FWS.

severe disruption of the natural situation will permanently damage my ability and that of my profession, now and in the future, to properly study a true native bear population in Louisiana and to help develop measures for its long-term conservation, activities that I have been involved in for much of my life.

32. Delisting of a species is generally hailed as a great conservation victory, though there is little evidence that such actions ever accomplish much for the benefit of the involved animals. In contrast, the listing actions with which I have been involved, have often been instrumental in helping species. In the mid-1970s I developed the regulations that added the population of grizzly bear in Yellowstone and other parts of the contiguous United States to the List of Endangered and Threatened Wildlife. At the time, the world's foremost authorities on the Yellowstone population, Frank and John Craighead, were warning that the population was on the verge of extinction. But after listing, the population doubled and came out of immediate danger. Frank's son, Dr. Lance Craighead, himself an authority on bears, is on public record as saying that listing saved the Yellowstone grizzly. In a personal message to me of August 19, 2020, he also stated:

The Yellowstone grizzly population was headed toward extinction in 1973 due to a number of human-caused increases in mortality and loss of habitat. The passage of the Endangered Species Act, followed by the listing of the grizzly bear as threatened in 1975, was the single most important action that reversed that trend and saved the Yellowstone population from likely extinction.

I also participated in the listings of the Mexican wolf, red wolf, and western gray wolf populations, opening the way for extensive recovery operations. As noted above, listing led to a bounce back of the TRB and LARB populations of the Louisiana black bear, which would otherwise likely have disappeared. The FWS itself is on record as saying

that listing "helped bring the Louisiana black bear back from the brink," and that from 1992 to 2016 estimated numbers increased from 150 to 500–750.¹³

33. It is a personal tragedy to me that, on the verge of a conservation triumph, the FWS, driven solely by a desire to delist, carried out the TRC translocations that will likely destroy the native Louisiana bear, rather than foster its true recovery, if the bear remains delisted. As shown by the very scientific authorities relied upon most extensively by the Service in its delisting decision, there is no substantive evidence that there had been hybridization between the TRB and the UARB populations prior to the TRC translocations. But those same authorities verified that the process had begun post-translocations, and more recent studies show that it is continuing.¹⁴ My scientific, professional, personal, recreational, and conservation interests will thus be harmed if the Louisiana black bear is not re-listed on the U.S. List of Endangered and Threatened Wildlife, and if a new recovery plan, stopping the hybridization process and providing connection and protection of actual *luteolus* populations is not implemented.

34. Potential conservation measures that would result from returning the Louisiana black bear to the U.S. List of Endangered and Threatened Wildlife, re-designating its critical habitat, and protecting its genome from further hybridization would greatly enhance my plans for additional study and observation. If the bear is re-listed, based on the fact that the UARB population is not native *luteolus*, the FWS would have to take immediate measures to curtail the hybridization process now ongoing between the UARB and TRB groups. If that is done, there would be reasonable potential for maintenance of a native

¹³ U.S. Fish and Wildlife Service. 2016 (March 28). The Louisiana black bear: A recovery success story. https://www.fws.gov/endangered/map/ESA_success_stories/LA/LA_story3/index.html

¹⁴ Reports of July 6 and July 7, 2017 from Wildlife Genetics International to Louisiana Department of Wildlife & Fisheries.

Louisiana black bear population with the genetic and physical characteristics of its prehistoric and historic ancestors. I and my professional colleagues thus would be able to carry out observations, collections, and studies of true, unaltered *luteolus*, and thereby record its characteristics for posterity and help develop measures for its perpetuation.

35. Unless the injuries discussed above are redressed through relisting and re-designation of critical habitat, I and my entire profession, now and in the future, will suffer substantial harm.
36. In addition to the threats to my interests due to hybridization, my interests are threatened by the directly foreseeable hunting seasons for Louisiana black bears that the Louisiana Department of Wildlife and Fisheries (LDWF) is likely to allow, as a direct result of the delisting. Providing hunting opportunities is in the Department's Management Plan for the bear. I have seen emails produced by LDWF in response to a Public Record Request confirming that since delisting, the agency is seriously considering opening a hunt/harvest for bears in Louisiana. These emails confirm that "[i]t seemed likely that LDWF was going to go forward with a hunt," and that this injury, although not yet realized, is imminent. A number of individuals of this rare subspecies would be killed as a result, thus reducing my opportunities to observe and enjoy the bears, as well as to continue ongoing scientific studies of them.
37. Finally, I am aware of data indicating that the rate of mortality of bear populations in Louisiana has increased substantially since delisting. During the period of listing, from 1992 to 2015, total confirmed mortalities averaged 16 per year.¹⁵ However, in the four

¹⁵ Murphy, S. M., B. C. Augustine, J. D. Clark, M. Davidson, M. J. Hooker, and S. C. Maehr. 2016. Long-term temporal trends in reported mortality for the Louisiana black bear. Draft manuscript produced by LDWF in response to a Public Record Request.

years subsequent to delisting, the annual average was 46.¹⁶ The increase may in part be due to the overall increase in bear numbers that resulted from the 1992 listing, but the current mortality rate still substantially exceeds what would be expected when comparing the likely average number of bears that existed during the 24-year listing period with the number present at delisting. Most deaths were human-induced, most of those being road kills. That problem is most serious in the TRB and the LARB and is expected to intensify in the latter area when a new segment of Interstate Highway is opened.¹⁷ While the factors involved in the apparent rise in mortality rates are not yet fully understood, any such increase would contribute to harm to my ability to observe and study the native Louisiana bear.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 16th day of July, 2021, in FALLS CHURCH, Virginia.

Ronald M. Nowak

Dr. Ronald M. Nowak

¹⁶ Louisiana Department of Wildlife and Fisheries, U.S. Fish and Wildlife Service, and U.S. Geological Survey. 2016–2019. Louisiana black bear post-delisting monitoring, 1st, 2nd, 3rd, and 4th Annual Reports. Available at <https://www.fws.gov/southeast/lafayette/endangered-species-and-recovery/>

¹⁷ Murphy, S. M., B. C. Augustine, M. W. Davidson, J. D. Clark, J. S. Laufenberg, M. J. Hooker, and J. Berry. 2015. Long-term temporal trends and sex-specific patterns of mortality for the threatened Louisiana black bear. Draft manuscript produced by LDWF in response to a Public Record Request.