EARTHJUSTICE

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NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

January 14, 2015

VIA CERTIFIED AND ELECTRONIC MAIL

Sally Jewell, Secretary
U.S. Department of the Interior
1849 C Street, N.W.
Washington, DC 20240

Dan Ashe, Director
U.S. Fish and Wildlife Service
1849 C Street, N.W.
Washington, DC 20240

Jonathan Jarvis, Director
National Park Service
1849 C Street, N.W.
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RE: Notice of Intent to Sue to Remedy Violation of the Endangered Species Act in Regard to the United States Fish and Wildlife Service's "No Jeopardy" Determination for the Grizzly Bear (Ursus arctos horribilis) in the September 13, 2013 Addendum to the Biological Opinion on the 2007 Bison and Elk Management Plan for the Jackson Hole National Elk Refuge and Grand Teton National Park

Dear Secretary Jewell, Director Ashe, and Director Jarvis:

I write on behalf of the Sierra Club and Western Watersheds Project to provide you with notice that the U.S. Fish and Wildlife Service ("FWS") and National Park Service ("NPS") are in violation of the Endangered Species Act ("ESA") with respect to NPS's ongoing administration of an Elk Reduction Program ("ERP") within Grand Teton National Park in northwest Wyoming.

Specifically, FWS and NPS are in violation of section 7 of the ESA, 16 U.S.C. § 1536, because the ERP threatens to cause the killing of grizzly bears, a threatened species, within Grand Teton National Park and these agencies have not lawfully complied with the duties imposed by ESA section 7 with respect to such agency actions that "may affect" endangered and threatened wildlife. 50 C.F.R. § 402.14(a). In this regard, FWS's issuance to NPS of a September 13, 2013 "addendum" document regarding the ERP does not satisfy FWS and NPS's section 7 duties because that "addendum" does not lawfully or rationally justify FWS's extraordinary attempt to exempt from ESA liability the killing of four grizzly bears within a national park.

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This notice is provided pursuant to section 11(g) of the ESA, 16 U.S.C. § 1540(g), and supplements a February 28, 2014 notice letter sent to you by Eric R. Glitzenstein concerning this same subject matter, which is hereby incorporated into this letter by reference.

I. THE PARTIES TO THIS NOTICE LETTER

Both parties to this notice letter have a strong interest in the conservation of the grizzly bear and of the integrity of our nation's irreplaceable national parks.

The Sierra Club is a national non-profit conservation organization with more than 595,000 members. Its mission is to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

Western Watersheds Project is a non-profit conservation organization founded in 1993 with the mission of protecting and restoring western watersheds and wildlife through education, public policy initiatives, and litigation. Headquartered in Hailey, Idaho, Western Watersheds Project has 2,000 members and field offices in Idaho, Montana, Oregon, Wyoming, Arizona, and California.

II. LEGAL FRAMEWORK

The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." Tenn. Valley Auth. v. Hill, 437 U.S. 153, 180 (1978). It was enacted "to provide a program for the conservation of ... endangered species and threatened species" and "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. § 1531(b). To receive the full protections of the Act, a species must first be listed by the Secretary of the Interior as "endangered" or "threatened" pursuant to ESA section 4. See id. § 1533. The ESA defines an "endangered species" as "any species which is in danger of extinction throughout all or a significant portion of its range." Id. § 1532(6). A "threatened" species" is "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Id. § 1532(20).

Section 7 of the ESA commands that all federal agencies "shall, in consultation with and with the assistance of" a federal wildlife agency (the FWS for terrestrial species such as the grizzly bear): (1) "utilize their authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered and threatened species," Id. § 1536(a)(1), and (2) "insure that any action authorized, funded, or carried out by [any agency] is not likely to jeopardize the continued existence of any endangered species or threatened species," id. § 1536(a)(2). Regulations implementing this consultation requirement direct that formal consultation is required before a federal agency may take "any action [that] may affect listed species." 50 C.F.R. § 402.14(a). Section 7(a)(2) of the ESA requires every federal agency to

"use the best scientific and commercial data available" in assessing impacts to protected species. 16 U.S.C. § 1536(a)(2).

Formal consultation results in the issuance of a Biological Opinion by the Service. If FWS concludes in the Biological Opinion that the proposed action is likely to jeopardize an endangered species or threatened species, the FWS may recommend reasonable alternatives to avoid the likelihood of jeopardy so that the agency action may proceed. See 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h)(3). But even if FWS concludes in the Biological Opinion that the agency's proposed action is not likely to jeopardize a listed species, FWS still must specify the amount or extent of any incidental "taking" of the species that is anticipated to occur as a result of the action and specify "reasonable and prudent measures" to minimize the impact of such takings, as well as the "terms and conditions" that the agency must follow in implementing such measures. 16 U.S.C. § 1536(b)(4); 50 C.F.R. §§ 402.14(i)(1)(i), (ii), (iv). "Taking," under the ESA, "means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). Such provisions concerning the incidental taking of endangered or threatened wildlife are embodied in an "Incidental Take Statement" ("ITS"). 50 C.F.R. § 402.14(i). The ITS authorizes the agency, if in compliance with the statement's terms and conditions, to "take" listed species without facing ESA liability. 16 U.S.C. § 1536(o)(2); 50 C.F.R. § 402.14(i)(5).

Even after the procedural requirements of a consultation are complete, however, the ultimate duty to ensure that an activity does not jeopardize a listed species lies with the action agency. An action agency's reliance on an inadequate, incomplete, or flawed biological opinion to satisfy its ESA section 7 duty is arbitrary and capricious. See, e.g., Stop H-3 Ass'n. v. Dole, 740 F.2d 1442, 1460 (9th Cir. 1984).

III. FACTUAL BACKGROUND

Grand Teton National Park's Elk Reduction Program results from a misguided program of winter elk feeding by FWS and the State of Wyoming in Jackson Hole and nearby areas that artificially inflates the local elk population such that the extraordinary step of hunting wildlife within a national park has been deemed necessary to control the population. In recent years, the wildlife disease consequences of the elk-feeding program have come to be recognized as a threat to the local elk population that overwhelms any benefit of winter feeding. For this reason, the U.S. Court of Appeals for the D.C. Circuit has recognized that continuation of the feeding program on the Jackson Hole National Elk Refuge is not consistent with FWS's obligations under the National Wildlife Refuge System Improvement Act. See Defenders of Wildlife v. Salazar, 651 F.3d 112, 117 (D.C. Cir. 2011). Nevertheless, the feeding program continues unabated. Now, as a result of the actions of NPS and FWS addressed in this letter, Grand Teton National Park's iconic grizzly bears have been added to the list of the program's casualties.

A. The Grizzly Bear

Grizzly bears define wilderness in the Northern Rocky Mountain region, and the presence of grizzlies is a key attribute of the region's national parks—an attribute that, at least in the lower-48 states, is virtually unique to the Northern Rockies region as a result of the grizzly's

history of persecution. Before European-American settlement of the American West, grizzly bears roamed from the Great Plains to the Pacific coastline, and from the Canadian border to Mexico, inhabiting every habitat except the most arid and hot desert lands. With settlement, grizzlies were shot, poisoned, and trapped wherever they were found, resulting in their extirpation everywhere except mountain redoubts far from human intolerance. In an historical blink of an eye—from 1850 to1950—humans restricted the range of grizzly bears by 98 to 99 percent, isolating the remaining bears in a few remnant islands of wild country. Once 50,000 to 100,000 strong in the lower 48, the grizzly population was reduced to fewer than 1,000 bears. Today, the few remaining areas occupied by grizzly bears in the lower-48 United States include Yellowstone and Grand Teton national parks and surrounding national forest lands in northwest Wyoming.

In 1975, FWS responded to the grizzly bear's plight by listing the species as threatened under the ESA. 40 Fed. Reg. 31,734 (July 28, 1975). Pursuant to ESA section 4(f), 16 U.S.C. § 1533(f), FWS drafted an initial recovery plan for the grizzly in 1982 and issued a revised recovery plan in 1993. The 1993 plan identified six recovery zones for the grizzly bear, each zone drawn so as to include habitat sufficient to support a recovered grizzly bear population. See generally U.S. Fish & Wildlife Serv., Grizzly Bear Recovery Plan (1993) [hereinafter 1993 Recovery Plan]. One of the recovery zones encompasses the Greater Yellowstone Area ("GYA"). Id., Part Three, at 39-58. The Greater Yellowstone grizzly bear population, which includes the grizzlies in Grand Teton National Park, is unique because it is geographically discrete from other grizzly bear populations, differs genetically from other grizzly populations, and utilizes terrestrial mammals as a food source far more than other grizzly bear populations. The population's "discreteness" is a particularly important factor; the GYE grizzly population is completely isolated from other grizzly populations, which means there is no interchange with other populations to contribute new genetic material or provide immigrant bears to offset grizzly mortalities within the Greater Yellowstone region.

Grizzly bear recovery in the GYA hinges on the establishment and implementation of scientifically sound recovery criteria, including minimum population numbers and mortality thresholds. FWS, in consultation with the Interagency Grizzly Bear Study Team ("IGBST"), an interagency consortium responsible for long-term monitoring and research of grizzly bears in the GYA, has established recovery criteria for the GYA grizzly bear population; the criteria set forth in the 1993 recovery plan have been updated several times in the intervening years based on the best available science. These recovery criteria apply across the entire GYA.

The IGBST established mortality thresholds for three different cohorts of grizzly bears in the GYA: independent-aged females, independent aged-males, and dependent young. These cohort-specific mortality thresholds are set at levels designed to ensure that the GYA grizzly population does not decline. In the words of the IGBST, the thresholds have been established "to maintain long-term population viability." IGBST, Updating and Evaluating Approaches to Estimate Population Size and Sustainable Mortality Limits for Grizzly Bears in the Greater Yellowstone Ecosystem 10 (Sept. 10, 2012). The IGBST sets mortality thresholds for the independent female cohort with particular care. Independent female grizzlies effectively drive population growth, and "providing maximum protection for females is essential to recovery." 1993 Recovery Plan, Part One, at 5. While one male grizzly bear can breed with multiple

females, it is the survival of a female and her cubs that enables the grizzly population to grow—and that growth rate is quite slow. As FWS has explained,

> [g]rizzly bears have one of the lowest reproductive rates among terrestrial mammals, resulting primarily from the late age of first reproduction, small average litter size, and the long interval between litters. ... [D]uring the first 10 years of her life, a female grizzly bear is capable of adding only two litters to the total population. If there are litters of two cubs with a 50:50 sex ratio, and a 50 percent survivorship of young to age 5.5, at best she can replace herself with one breeding age female in the first decade of her life.

Id., Part One, at 4. Over her lifetime, a female theoretically could add 3.5 females to the population, but "actual reproductive expectancy is usually far less." Id., Part One, at 4-5. Thus, determining a sustainable mortality rate for the independent female cohort, and ensuring that mortality rate is not exceeded, is essential for grizzly bear recovery. Robust mortality thresholds for GYA grizzly bears are all the more important given that human/bear conflicts and mortalities were a primary reason that the grizzly bear was listed as threatened, and mortalities from such conflicts remain a primary source of grizzly bear mortality.

B. Grand Teton National Park's Elk Reduction Program

The 1950 legislation establishing Grand Teton National Park provided for NPS and the Wyoming Game and Fish Commission ("Commission") to devise "a program to insure the permanent conservation of the elk within the Grand Teton National Park established by this Act," including "the controlled reduction of elk in such park, by hunters licensed by the State of Wyoming and deputized as rangers by the Secretary of the Interior, when it is found necessary for the purpose of proper management and protection of the elk." 16 U.S.C. § 673c(a). Under this legislation, at least once yearly between February 1 and April 1, the Commission and NPS must submit to the Interior secretary and Wyoming's governor for their approval "their joint recommendations for the management, protection, and control of the elk for that year." Id. § 673c(b). The recommendations, once approved, are to be carried out through the issuance of appropriate state and federal orders and regulations, which "shall include provision for controlled and managed reduction by qualified and experienced hunters licensed by the State of Wyoming and deputized as rangers by the Secretary of the Interior, if and when a reduction in the number of elk by this method within the Grand Teton National Park established by this Act is required as a part of the approved plan for the year." Id.

In 2007, the NPS assessed its management of the Jackson elk herd in a formal Bison and Elk Management Plan prepared together with FWS, which manages a large proportion of the herd each winter on the nearby Jackson Hole National Elk Refuge. The 2007 Plan reflected a decision by NPS to continue the Elk Reduction Program in Grand Teton National Park "when necessary." U.S. Fish & Wildlife Serv. & Nat'l Park Serv., Record of Decision: Nat'l Elk Refuge/Grand Teton Nat'l Park, Final Bison and Elk Mgmt. Plan & Envtl. Impact Statement, at 5 (Apr. 2007). As NPS has explained, a principal cause of perceived "necessity" for the ERP is the winter-feeding program conducted by FWS on the National Elk Refuge and on state elk feedgrounds in the nearby drainage of the Gros Ventre River:

> The need for this reduction program stems partly from an intensive management framework that includes annual winter feeding programs on the National Elk Refuge and in the upper Gros Ventre drainage. Feeding sustains high numbers of elk with unnaturally low mortality rates. A majority of elk that are fed ... during the winter on the Refuge also summer in, or use migration routes through, Grand Teton National Park. Consequently, the reduction program targets elk from three primary herd segments: Grand Teton, southern Yellowstone National Park, and the Teton Wilderness area of Bridger-Teton National Forest.

Nat'l Park Serv., Elk Reduction Program Begins Tomorrow in Grand Teton NP (Oct. 18, 2013).

Yet, while the feeding program largely drives the need for the ERP, the feeding program itself is both biologically and legally flawed. First, regarding wildlife biology, the D.C. Circuit has aptly summarized the problems created by the practice of winter elk feeding on the National Elk Refuge:

> In recent years, it has become apparent that this practice, though born of benevolence, causes significant problems. According to the Department of the Interior, supplemental feeding leads to a seasonal concentration of elk and bison that is "an unnatural situation that has contributed to ... an increased risk of potentially major outbreaks of exotic diseases ... [and] damage to and loss of habitat." Final Bison and Elk Management Plan and Environmental Impact Statement for the National Elk Refuge/Grand Teton National Park/John D. Rockefeller, Jr., Memorial Parkway 9 (Feb. 1, 2007) [hereinafter February 2007 Management Plan and EIS]. This risk poses an existential threat to the elk and bison and puts the very purpose of the Refuge at jeopardy. See id. (noting that the risk of diseases posed by increased concentrations of the animals has "the greatest potential to hinder ... [the] purposes ... [of] the National Elk Refuge").
>
> One major problem is brucellosis—also known as "Bangs disease, undulant fever, and contagious abortion," id. at 564—which causes an infected female to abort her first calf, leaving behind contaminated fetal tissue on the ground capable of transmitting the disease to other animals, id. at 129. Brucellosis rates within normal Wyoming elk herds are approximately two percent, but rates among elk that frequent the Refuge feeding lines have averaged around seventeen percent in recent years. Id. at 130. Another major problem, chronic wasting disease (CWD), is the elk version of mad cow disease: Like its bovine counterpart, CWD assaults the central nervous system, causing brain lesions, behavioral changes, a loss of body condition, and ultimately death. CWD is caused by abnormal, non-living proteins known as prions that persist in the soil where infected animals graze, even after intensive efforts to remove them. Id. at 136–40. Statistical sampling suggests that in open, elk-hunt areas in Wyoming, the prevalence of CWD in elk averages around four percent. Id. at 137. But in confined areas—like those created by the feed lines—the prevalence can exceed ninety percent. Id. CWD is not yet prevalent in the Refuge, but if that changes, "environmental

> contamination will become a major concern due to the disease's ability to persist in the environment for a long period of time." Id.
>
> All agree that supplemental feeding increases the risk of such diseases. Without supplemental feeding, the elk would gather in smaller groups, meaning that one sick elk would infect only the handful of others around it. But because the feeding lines bring so many together, the disease of one can quickly become that of many, if not all.

Defenders of Wildlife, 651 F.3d at 113-14.

Because of these acknowledged impacts of feeding, the 2007 Bison and Elk Management Plan for Grand Teton National Park and the Jackson Hole National Elk Refuge promised a 15-year program designed to "create conditions that would allow the elk and bison to survive the winter without supplemental feeding and, in the meantime, manage the risk of contagion until the practice ended." Id. at 114-15.

Based on the promise of this 15-year program, the D.C. Circuit in 2011 rejected a challenge to the 2007 Plan by conservationists who sought a firm deadline for the end of winter elk feeding on the Jackson Hole National Elk Refuge. See id. at 117-18. Given the plan's stated commitment to "ending the practice over time while maintaining the flexibility needed to respond to facts on the ground," the D.C. Circuit held that it was not arbitrary and capricious for FWS to set no deadline for termination of winter feeding. See id. Nevertheless, the Circuit Court left "no doubt that unmitigated continuation of supplemental feeding would undermine the conservation purpose of the National Wildlife Refuge System." Id. at 117. And, the Court said, "[i]t is highly significant and indeed dispositive to us ... that the agencies are committed to ending supplemental feeding." Id. Indeed, the Court stated, "the plan might well have been unreasonable had the agencies categorically refused to phase out the winter feeding program in spite of all the evidence in the record about the dangers of supplemental feeding." Id. (quotations and citation omitted).

Nevertheless, despite the passage of nearly eight years since adoption of the 2007 Bison and Elk Management Plan and more than three years since the D.C. Circuit's decision, winter elk feeding on the National Elk Refuge continues with no evidence of the phase-down promised by FWS. Indeed, while the National Elk Refuge hosted approximately 7,000 elk on its winter feed lines when the Bison and Elk Management Plan was issued in 2007, FWS fed 8,296 elk on the refuge during the winter of 2013-14. See Mike Koshmrl, Elk leave natural range for refuge, Jackson Hole News & Guide, Mar. 6, 2014 (quoting refuge biologist's observation of increasing elk dependence on winter feeding in Jackson Hole). Accordingly, the Elk Reduction Program in Grand Teton National Park is continuing and even expanding—as are its consequences for park wildlife.

C. Taking of Grizzly Bears Due To the Elk Reduction Program

As recent events have made clear, those consequences include the killing of grizzly bears within Grand Teton National Park as a result of lethal encounters between bears and elk hunters

that arise when grizzlies claim hunter-killed elk or when hunters surprise grizzlies in dense vegetation. In conjunction with its adoption of the 2007 Bison and Elk Management Plan, NPS consulted with FWS pursuant to the ESA concerning the plan's likely impacts on grizzly bears. FWS's 2007 biological opinion on the plan concluded that "the variability of terrain and densely wooded areas in the Park contribute to an elevated risk of hunting-related conflicts occurring," although it deemed this increased risk to be "minimal in the long term" in light of plans to phase down the Elk Reduction Program in conjunction with the promised reduction of winter elk feeding. U.S. Fish & Wildlife Serv., Final Biological Opinion for the Bison and Elk Mgmt. Plan, at 24 (2007) ("BiOp"). However, given FWS's anticipation that the ERP "will exacerbate the short-term risk for hunting-related grizzly bear mortality within the Park," the agency anticipated the killing of "1 grizzly bear (adult or juvenile) over the 15-year implementation period of the Plan." Id. at 25. FWS embodied this finding in an incidental take statement, which exempted NPS from ESA liability for taking of threatened wildlife so long as NPS acts in compliance with FWS's statement. See id. at 24-25. To minimize the impact of this anticipated taking, FWS prescribed only one "reasonable and prudent" measure to be implemented by NPS—"[m]inimize the likelihood of hunting-related human/grizzly bear conflict associated with the Project through education of hunters." Id. at 26.

On November 22, 2012, a group of three hunters participating in the ERP shot and killed an adult male grizzly bear within Grand Teton National Park. See Memorandum from Superintendent, Grand Teton Nat'l Park, Moose, Wyo., to Field Supervisor, U.S. Fish & Wildlife Serv., Wyo. Field Office, Cheyenne, Wyo. 1 (Apr. 29, 2013). Accordingly, NPS requested reinitiation of consultation with FWS pursuant to the ESA, stating that the killing of this male grizzly "leaves the park with no additional grizzly bear take related to the ERP during the remaining 9 years of the plan's intended 15 year life span." Id. NPS's request reported that "several grizzly bears" had been observed seeking out the remains of hunter-killed elk within the park since 2007, and stated, "[w]e believe that grizzly bears will continue this behavior and that the risk of hunter-grizzly bear contacts will continue to be relatively high as long as the ERP is necessary." Id. at 2; see also id. at 4 ("We believe continued implementation of the [Bison and Elk Management Plan] is likely to incur additional losses of grizzly bears from hunter-grizzly bear conflicts, which will adversely affect grizzly bears.").

FWS responded to this reinitiation request on September 13, 2013, with a four-page document styled as an "addendum" to the 2007 BiOp. FWS stated that this "addendum" "tiers off of our original biological opinion," but at the same time admitted that conditions had changed from those examined in the 2007 BiOp—specifically, "grizzly bear distribution and numbers in the south end of the Park appear to have increased." Memorandum from Field Supervisor, U.S. Fish & Wildlife Serv., Wyo. Field Office, Cheyenne, Wyo., to Superintendent, Nat'l Park Serv., Grand Teton Nat'l Park, Moose, Wyo. & Refuge Manager, U.S. Fish & Wildlife Serv., Nat'l Elk Refuge, Jackson, Wyo. 2 (Sep. 13, 2013) ("Addendum"). FWS agreed with NPS that elk hunting within Grand Teton National Park creates "a relatively high risk of hunter-grizzly bear contacts as long as the ERP is necessary," id., and that "continued implementation of the Plan is likely to incur additional losses of grizzly bears from hunter-grizzly bear conflicts, which will adversely affect grizzly bears," id. at 3. Based on this information, FWS stated that it "anticipates up to 4 additional grizzly bears in the Park ... may be incidentally taken directly or indirectly as a result of the Plan during the remaining 9 years this biological opinion is valid."

Id. at 4 (emphasis original). FWS stated that "[t]his addendum to the 2007 biological opinion and new Incidental Take Statement supersede the relevant portions of our 2007 biological opinion." Id. (emphasis original).

Despite anticipating the killing of four additional grizzly bears within Grand Teton National Park, FWS did not impose any new reasonable and prudent measures to minimize the impact of such taking. In this regard, FWS stated its agreement with certain new actions taken by NPS in administering the 2013 ERP—closing to hunting the densely wooded area along the Snake River where the 2012 grizzly taking occurred, starting the hunt two weeks later, limiting the amount of ammunition that hunters may carry in the field, and restricting the number of shots hunters may take at a running group of elk. Id. at 2, 4. Nevertheless, while admitting that these actions were taken "specifically for the 2013 season and in the future, they may change," id. at 3, FWS did not mandate continuation of any of these actions as reasonable and prudent measures necessary to minimize the impact of the anticipated taking, nor did it even consider doing so. Nor did FWS consider mandating any other measures to reduce harm to grizzly bears.

In sum, at the mid-point of the lifespan of the NPS and FWS Bison and Elk Management Plan, which promised a decrease in winter elk feeding and its attendant adverse ecological ripple effects throughout the Jackson Hole area, the NPS and FWS have tacitly acknowledged their failure to fulfill that promise—and betrayed their lack of faith in their ability to do so in the future—by anticipating and exempting from statutory liability an increase in the permissible killing of the grizzly bear, one of our nation's most iconic wildlife species, within Grand Teton, one of our nation's most iconic national parks, over the next eight years.

IV. VIOLATIONS OF THE ENDANGERED SPECIES ACT

FWS's "addendum" to the 2007 BiOp and its accompanying increased incidental take statement to authorize elk hunting in Grand Teton National Park that will adversely impact grizzly bears violates the ESA. NPS's arbitrary reliance on the unlawful "addendum" equally violates the ESA.

A. FWS's Cursory "Addendum" Cannot Lawfully Exempt Taking Of Grizzly Bears From ESA Liability

First, NPS's reliance on FWS's cursory "addendum" to provide a statutory exemption from liability for the taking of grizzly bears in Grand Teton National Park violates the ESA because the "addendum" does not constitute a lawful response to NPS's need to reinitiate consultation under the ESA and therefore cannot lawfully convey an incidental take exemption. ESA implementing regulations provide that, "[i]f the amount or extent of taking specified in [a biological opinion's] incidental take statement is exceeded," then "[r]enitiation of formal consultation is required and shall be requested by the Federal agency or by the Service." 50 C.F.R. § 402.16(a) (emphasis added). Formal consultation, in turn, is a process defined by ESA regulations to require FWS to undertake specific information-gathering and analysis obligations, including evaluating the current status of the affected species, id. § 402.14(g)(2); evaluating the effects of the proposed agency action together with cumulative effects on the affected species, id. § 402.14(g)(3); and, ultimately, "[f]ormulat[ing] its biological opinion as to whether the action,

taken together with cumulative effects, is likely to jeopardize the continued existence" of the species, id. § 402.14(g)(4). Only after FWS has engaged in that formal consultation procedure and formulated a comprehensive biological opinion regarding the jeopardy issue may the agency provide "a statement concerning incidental take." Id. § 402.14(i).

FWS's "addendum" does not even attempt to comply with these formal consultation requirements. Rather than preparing a new comprehensive biological opinion, FWS asserted that the "addendum" "tiers off" of the agency's 2007 BiOp, but the ESA regulations provide for no such "tiering" where reinitiation of formal consultation is required. See id. §§ 402.14, 402.16. Accordingly, FWS's attempt to short-circuit the reinitiation process fails as a matter of law.

Further, while purporting to "tier off" of the 2007 BiOp, the "addendum" admits that circumstances have changed since that BiOp was issued, rendering the 2007 BiOp an inadequate environmental analysis tool even if such "tiering" were permitted—which it is not. For instance, the "addendum" admits that, in the years since issuance of the 2007 BiOp, the "population growth rate" of the Yellowstone-area grizzly bear population has slowed or stopped while "grizzly bear distribution has expanded in various areas in the ecosystem, including in [Grand Teton National] Park." Addendum at 3. Indeed, much has changed for grizzly bears in the Yellowstone area since 2007. Most notably, while FWS's 2007 BiOp noted in passing the importance of whitebark pine seed cones as a food source for the region's grizzly bears, see BiOp at 11, in the years since 2007 an effort by FWS to remove Yellowstone-area grizzlies from the list of species protected under the ESA failed when the U.S. Court of Appeals for the Ninth Circuit held that FWS failed to account for the threat posed to grizzlies by the ongoing large-scale loss of whitebark pine from the Yellowstone region due to warming climatic conditions. See Greater Yellowstone Coalition v. Servheen, 665 F.3d 1015 (9th Cir. 2011). Contemporaneous with loss of the whitebark pine food source, the grizzly population trajectory has flattened and the population may even have declined. See Declaration of David Mattson ¶¶ 4, 7 (attached as Exhibit 1).

FWS's 2007 BiOp could not—and did not—address these acknowledged changed circumstances or the loss of whitebark pine due to climate change. Nor does FWS's cursory "addendum" fill this analytical gap by evaluating the status of the Yellowstone-area grizzly bear population in light of these new issues and concerns. Further, the "addendum" fails to address impacts of the Grand Teton National Park ERP on grizzly bears together with cumulative effects—including, for example, the cumulative effect of whitebark pine loss that promises to increase grizzly bear reliance on meat food sources, threatening even greater conflicts with elk hunters. In short, the "addendum" fails to fulfill the requirements of a comprehensive biological opinion that is mandatory when reinitiation of consultation is triggered under 50 C.F.R. § 402.16. Because FWS can anticipate and exempt the incidental taking of listed species only after preparing such a comprehensive biological opinion, the "addendum" cannot lawfully convey a statutory exemption for the taking of grizzly bears. NPS's reliance on the "addendum" is therefore unlawful.

B. FWS's "Addendum" Failed Even to Consider Imposing Additional Measures to Minimize the Impact of the Elk Reduction Program

Second, despite anticipating the killing of four grizzly bears within Grand Teton National Park, FWS's "addendum" undertook no consideration and offered no discussion of additional "reasonable and prudent measures" to minimize the impact of the anticipated taking. The ESA requires that, when FWS issues an incidental take statement, the agency "shall" also "specif[y] those reasonable and prudent measures that the [agency] considers necessary or appropriate to minimize such impact" of the taking. 16 U.S.C. § 1536(b)(4)(C)(ii) (emphasis added); accord 50 C.F.R. § 402.14(i)(1)(ii). However, FWS's "addendum" fails even to discuss any such additional measures. Most notably, although FWS stated its agreement with actions taken by NPS in administering the 2013 ERP and further acknowledged that such actions were only temporary, see Addendum at 3, 4, FWS offered no discussion and apparently undertook no consideration whether any of those actions should be imposed as mandatory "reasonable and prudent measures" to minimize impacts on the grizzly bear, or whether other actions not yet implemented or contemplated by NPS should be adopted for that purpose. FWS's failure to specify—or even to consider—"reasonable and prudent measures" to minimize the impact of the Grand Teton National Park ERP on grizzly bears violated the ESA. Accordingly, NPS's reliance on FWS's action likewise violates the statute.

C. FWS's "Addendum" Failed Rationally to Assess the Impact of the Anticipated Killing of Four Additional Grizzly Bears

Third, FWS's "addendum" failed rationally to assess the impact of the anticipated killing of four additional grizzly bears in Grand Teton National Park in light of other killing of grizzly bears that FWS anticipates will occur, and has exempted from ESA liability, as a result of numerous incidental take statements for grizzly bears in the Yellowstone-area population. The ESA permits FWS to anticipate and exempt incidental taking in connection with a federal agency action only after determining that such taking is not likely to jeopardize the continued existence of the affected species. See 16 U.S.C. § 1536(b)(4)(B); accord 50 C.F.R. § 402.14(i). FWS's "addendum" concluded that the taking of four additional grizzly bears in Grand Teton National Park would not jeopardize the Yellowstone-area grizzly bear population "given the current estimated population of grizzly bears in the [Greater Yellowstone Area] and overall sustainable annual mortality levels." Addendum at 3-4. FWS reached this conclusion by looking at the overall population trajectory of and mortality thresholds established for the GYA grizzly bear population writ large, and determining that the take of four bears in Grand Teton National Park is not likely to cause those GYA-wide thresholds to be exceeded. However, FWS failed to examine the "big picture" of the impact on annual grizzly mortality levels resulting from killing of grizzly bears that FWS itself anticipates—and has itself exempted from ESA liability—in numerous other incidental take statements for grizzly bears throughout the Yellowstone region.

In this regard, it is important to note that, in estimating anticipated take for any ITS, FWS must identify a level of take that is reasonably likely to occur. See Ariz. Cattle Growers' Ass'n v. FWS, 273 F.3d 1229, 1242 (9th Cir. 2001) ("[A]bsent rare circumstances such as those involving migratory species, it is arbitrary and capricious to issue an Incidental Take Statement when the Fish and Wildlife Service has no rational basis to conclude that a take will occur

incident to the otherwise lawful activity."). Thus, in every ITS issued across the GYA, the Service has identified an anticipated level of take reasonably likely to occur—not an overestimate of take that is unlikely to ever be realized. But nowhere in the addendum did FWS analyze the implications of take anticipated in Grand Teton National Park in concert with take that FWS has determined is reasonably likely to occur elsewhere in the ecosystem.

Review of operative incidental take statements issued by FWS for grizzly bears in the Yellowstone region reveals that the agency anticipates the killing of 65 female grizzly bears (including the four anticipated by FWS to be killed in Grand Teton National Park).[1] Depending on when they accrue, these anticipated takings could significantly alter the picture of "overall sustainable annual mortality levels" relied upon by FWS in the "addendum." Addendum at 4. For example, the updated sustainable annual mortality threshold for adult female grizzly bears in the Yellowstone-area population is 7.6% percent.[2] See Interagency Grizzly Bear Study Team, Yellowstone Grizzly Bear Investigations 2013 31 (2014). Based on the most recent estimate of 258 adult female grizzly bears in the Yellowstone-area population at the end of 2013, see id., this means that the independent female cohort could sustain a maximum of 20 mortalities per year across the GYA before the grizzly population would be pushed into decline. In the aggregate, the lethal removals of female bears that FWS has anticipated across the Yellowstone region, including the four killings anticipated by the agency in Grand Teton National Park, more than triple this limit. Accordingly, the amount of grizzly bear take across the Yellowstone region anticipated by FWS is more than sufficient to exceed the sustainable annual mortality threshold for adult female grizzly bears for three consecutive years. Further, this does not even account for additional, unknown grizzly bear mortalities. For every known grizzly bear mortality in the Greater Yellowstone Area, there are additional unknown mortalities. See IGBST, Reassessing Methods to Estimate Population Size and Sustainable Mortality Limits for the Yellowstone Grizzly Bear 41 (2005) (ratio of known:unknown deaths approximately 1:2). Thus, total grizzly bear mortality in the GYA—and its impact on the sustainability of the grizzly bear population—would be substantially higher than that anticipated by the ITSs alone. Such anticipated future mortality presents a substantial issue concerning the status of the Yellowstone-area grizzly population given that available scientific information already documents increased mortalities,

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[1] See Exhibit 2 and Appendix of referenced biological opinions.

[2] The IGBST originally recommended the 7.6% independent female mortality threshold in its 2012 document entitled Updating and Evaluating Approaches to Estimate Population Size and Sustainable Mortality Limits for Grizzly Bears in the Greater Yellowstone Ecosystem, at 8, 37. The previously recommended threshold for this cohort was 9%. Id. at 8, 15, 37. The IGBST recommended this change to account for lower observed juvenile survival rates and fecundity, as well as its desire to manage for a stable (rather than increasing) population. Id. at 7-8, 37. While not yet formally accepted, the IGBST refers to both this threshold, as well as its previously recommended threshold of 9%, in its annual reports. See, e.g., Interagency Grizzly Bear Study Team, Yellowstone Grizzly Bear Investigations 2013 31 (2014). Even if a 9% mortality threshold remained in effect, this translates to a maximum of 23 female bear deaths per year. Inclusive of Grand Teton National Park, FWS has anticipated the take of nearly 3 times the sustainable level of mortality.

reduced survival rates among significant components of the population, and even a potential declining population trajectory in association with grizzly transition to a more heavily meat-based diet in the wake of the collapse of whitebark pine since 2007. See Mattson Decl. ¶¶ 4-7 (Exhibit 1).

Nevertheless, FWS failed to even consider this level of incidental taking, or the implications of this level of taking for total grizzly bear mortality in the GYA, before relying on "overall sustainable annual mortality levels" in its jeopardy analysis. At a minimum, FWS was required to at least consider the implications of this level of anticipated incidental take before relying on "overall sustainable annual mortality levels" to conclude that the killing of four additional grizzly bears in Grand Teton National Park would be inconsequential for the larger Yellowstone-region population. In failing to do so, FWS violated the ESA. For this reason too, NPS may not lawfully rely on FWS's action.

V. CONCLUSION

If NPS does not cure the violations of law described above immediately, upon expiration of 60 days the parties to this notice intend to file suit against the NPS pursuant to the citizen suit provision of the ESA, 16 U.S.C. § 1540(g), and other applicable laws. If you would like to discuss the significant ESA violations described above and seek a mutually acceptable solution to them, please contact me.

Sincerely yours,

Timothy J. Preso

Exhibit 1

DECLARATION OF DAVID MATTSON

I, David Mattson, declare as follows:

1. My 30 plus years of professional training and experience have focused on the ecology and management of grizzly bears and mountain lions as well as on the role of science in natural resources policy. I have a Bachelor's Degree in Forest Management, an M.S. Degree in Forest Ecology, and a Ph.D. Degree in Wildlife Ecology from the University of Idaho. Prior to my retirement in 2013, I was Research Wildlife Biologist and Leader of the Colorado Plateau Research Station with the U.S. Geological Survey (USGS). I also held positions as Visiting Scholar at the Massachusetts Institute of Technology (MIT) and a related position as Western Field Director of the MIT-USGS Science Impact Collaborative. I currently hold positions as Lecturer and Senior Visiting Scientist at the Yale School of Forestry & Environmental Studies, Adjunct Faculty at Northern Arizona University, and Research Associate with the Northern Rockies Conservation Cooperative. I co-teach courses at Yale on, among other things, the conservation of large carnivores, large-scale conservation, and natural resources policy.

2. My investigations of Yellowstone's grizzly bears date back to 1979 when, beginning with that field season, I annually covered over 1500 miles on foot in the backcountry of the Yellowstone Ecosystem studying the habitat and behaviors of grizzly bears. My fieldwork in the Yellowstone Ecosystem continued through 1993, including a period from 1984-1993 when I held primary responsibility for investigating grizzly bear diet, habitat use, and relations with humans as a member of the Interagency Grizzly Bear Study Team. More recently, during 2003-2013, I led investigations of mountain lion ecology and demography in 7 different study areas in the southwestern United States. Specific to the content of this declaration, my investigations of the demography of populations of large carnivores have spanned 1990 through the present. I have authored or co-authored a number of publications of relevance to the demography of the Yellowstone grizzly bear population, including two papers on the effects of food variability and habituation to humans (Mattson et al. 1992; Pease and Mattson 1999), two papers on methods used for population monitoring (Mattson 1997; Mattson 1998), one paper on factors implicated in West-wide extirpations of grizzly bears (Mattson and Merrill 2002), and three papers on the extent and nature of habitat suitable for supporting grizzly bear populations in the northern U.S. Rocky Mountains (Merrill et al. 1999; Merrill and Mattson 2003; Mattson and Merrill 2004). My grizzly bear-related work has been covered by journals such as *Science*, and reported in invited lectures at venues such as the *Smithsonian Institute* and the *American Museum of Natural History*. My attached resume (Exhibit 1) provides additional information. A bibliography of literature cited in this declaration is attached as Exhibit 2 to this declaration.

3. The Yellowstone grizzly bear population has recently experienced catastrophic losses of two key foods—whitebark pine seeds and cutthroat trout. A recent climate-driven mountain pine beetle epidemic killed most mature whitebark pine trees in the ecosystem (Macfarlane et al. 2013)—trees that had produced seeds that were a major source of food for grizzly bears, especially for adult females (Mattson 2000). The maximum losses of whitebark pine occurred between roughly 2003 and 2007 (Macfarlane et al. 2013). Somewhat earlier, during the late 1990s and early 2000s, predation by non-native Lake trout, introduced during the mid-1990s into Yellowstone Lake, functionally eliminated the native cutthroat trout that had

been a major source of energy for most of the bears living near Yellowstone Lake (Mattson and Reinhart 1995; Haroldson et al. 2005; Teisberg et al. 2014). Unlike cutthroat trout, the Lake trout do not spawn in tributary streams, but rather in the depths of Yellowstone Lake, and are therefore not available as a food source for grizzly bears.

4. The most recent estimates of size published for the Yellowstone grizzly bear population by the Interagency Grizzly Bear Study Team (IGBST) in its 2013 Annual Report, using the current preferred Mark-Resight method, show that the population has not increased since the early 2000s (Haroldson et al. 2014; see Figure 1a). This conclusion is consistent with a statement I understand was made by the current IGBST Leader, Frank van Manen, to managers at the 9-10 December, 2014, meeting of the Interagency Grizzly Bear Committee (Chaney 2014). Moreover, if a trend line is fit to a 3-yr running average of IGBST annual population estimates for the period 2007-2013, there is evidence of a population decline (Figure 1b). This 2007-2013 period follows the catastrophic loss of whitebark pine and cutthroat trout as grizzly bear food sources for the Yellowstone population. All referenced figures are set forth in Exhibit 3.

5. Recently published research suggests that Yellowstone's grizzly bears are compensating for recent catastrophic losses of whitebark pine and cutthroat trout by eating more meat (Middleton et al. 2013; Schwartz et al. 2014). Part of this increase involves bears scavenging the remains of hunter-killed elk (Orozco & Miles 2013) as well as depredating on livestock, primarily on the periphery of the ecosystem in areas such as the Upper Green River drainage (DeBolt et al. 2013, 2014). Increased consumption of meat from livestock is indicated by the substantial increase in depredation-related human-grizzly bear conflicts since 2007 (data from IGBST Annual Reports, 2000-2013).

6. Coincident with this transition by grizzly bears to heavier reliance on meat as a food source, the number of known grizzly bear mortalities in the Yellowstone population has sharply increased. The IGBST's published statements and data, most recently in its 2013 Annual Report (Haroldson & Frey 2014), show that cub and yearling survival rates have likely declined in recent years at the same time that ecosystem-wide numbers of known and probable grizzly bear deaths have increased (since 2007) to unprecedented levels, even after considering a decline during 2013 and 2014 (van Manen quoted in Dayton 2014; see Figure 2). Deaths caused by both elk hunters and by individuals responding to livestock conflicts have contributed substantially to this increase, although deaths by other causes have increased as well (see Figure 3). Deaths caused by hunters increased steeply after 2007 and, although fewer during 2012-2013, remain higher than during any other period of record keeping, despite a decline in numbers of sport hunters in grizzly bear range (Clapp et al. 2014; Figure 3b).

7. In summary, invoking weight of evidence, this information leads to the following conclusions: The Yellowstone grizzly bear population has not grown since the early 2000s and may have even declined since 2007. The recent increases in grizzly bear deaths from meat-related conflicts with humans (i.e., conflicts involving livestock and big game either killed or pursued by hunters) are related, in turn, to increased reliance by bears on meat. This turn to meat is plausibly related to recent catastrophic losses of two key foods—whitebark pine seeds and cutthroat trout.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on December 22, 2014, in Livingston, Montana.

David Mattson

Mattson Declaration
Exhibit 1

David J Mattson, Ph.D.

Short Biography

Dr. David Mattson is currently Lecturer and Visiting Senior Scientist at the Yale School of Forestry and Environmental Studies, Adjunct Faculty at Northern Arizona University, and Research Associate with the Northern Rockies Conservation Cooperative. His former positions, prior to retirement from the U.S. Geological Survey, include Research Wildlife Biologist, Leader of the Colorado Plateau Research Station, and Western Field Director of the MIT-USGS Science Impact Collaborative, all with the USGS. He holds degrees in Forest Resource Management and Forest Ecology and a doctorate in Wildlife Resource Management from the University of Idaho. Dr. Mattson has studied large carnivores for 30 years and has incorporated ecological information from pumas and grizzly bears into demographic, habitat, and risk management models. His ecological research has also included focus on details of carnivore behaviors, including foraging, predation, and relations with humans. His human dimensions research has focused on conservation policy issues dealing with social, political, and organizational dynamics that shape policies and practices of carnivore and other conservation programs. David teaches classes on relations between science and policy. His work has been featured in *Science*, *Ecology*, *Conservation Biology*, *Biological Conservation*, *The Journal of Wildlife Management*, and the *Journal of Mammalogy*, and invited talks at the Smithsonian, American Museum of Natural History, the American Institute of Biological Sciences, and International Conferences on Bear Research and Management.

Areas of research

- Behavioral ecology and demography of large carnivores
- Spatial models of habitat suitability and demography
- Human-large carnivore relations
- Public interest leadership
- Conservation policy and decision-making
- Relations between science and policy

Past and present research projects

- Demography, foraging behavior, and relations with humans and habitat, Yellowstone grizzly bears, 1979-present
- Demography and relations with humans and habitat, Kluane grizzly bears, Yukon Territory, 1992-2006
- Models of habitat suitability for grizzly bears in western North America, 1995-present
- Conservation policy systems for grizzly bears, mountain lions, and wildlife water developments, 1995-present
- Practices to foster coexistence between ranchers and grizzly bears, western Montana, 1998-present
- Demography, foraging behavior, and relations with humans and habitat, mountain lions in Arizona, Utah, and Nevada, 2002-present
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Exhibit 3

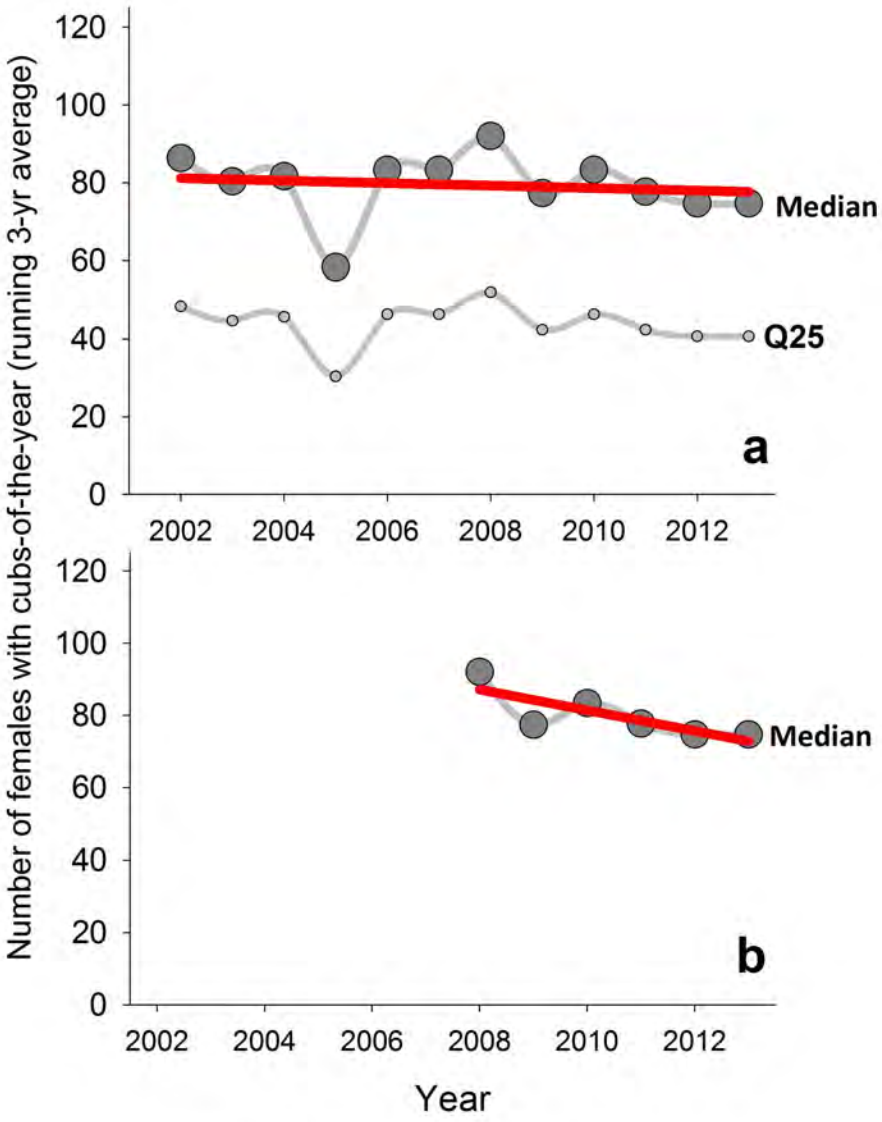

Figure 1. Three-year running average of total number of females with cubs-of-the-year (COY) estimated by the current preferred Mark-resight method. Estimates of total population size are essentially a simple multiplication of this number to account for other sex-age classes. The top figure (**a**) shows the median estimate of numbers of females with COY in the Yellowstone grizzly bear population as dark gray dots and the lower quartile bound of this estimate (Q25) as smaller lighter gray dots. A linear trend line (in red) has been fit to the median estimates showing no increase in population size. The bottom figure (**b**) repeats the information for median estimates, but only for the years 2007-2013. Invoking weight of evidence, the fitted trend line is more consistent with a declining rather than stable population.

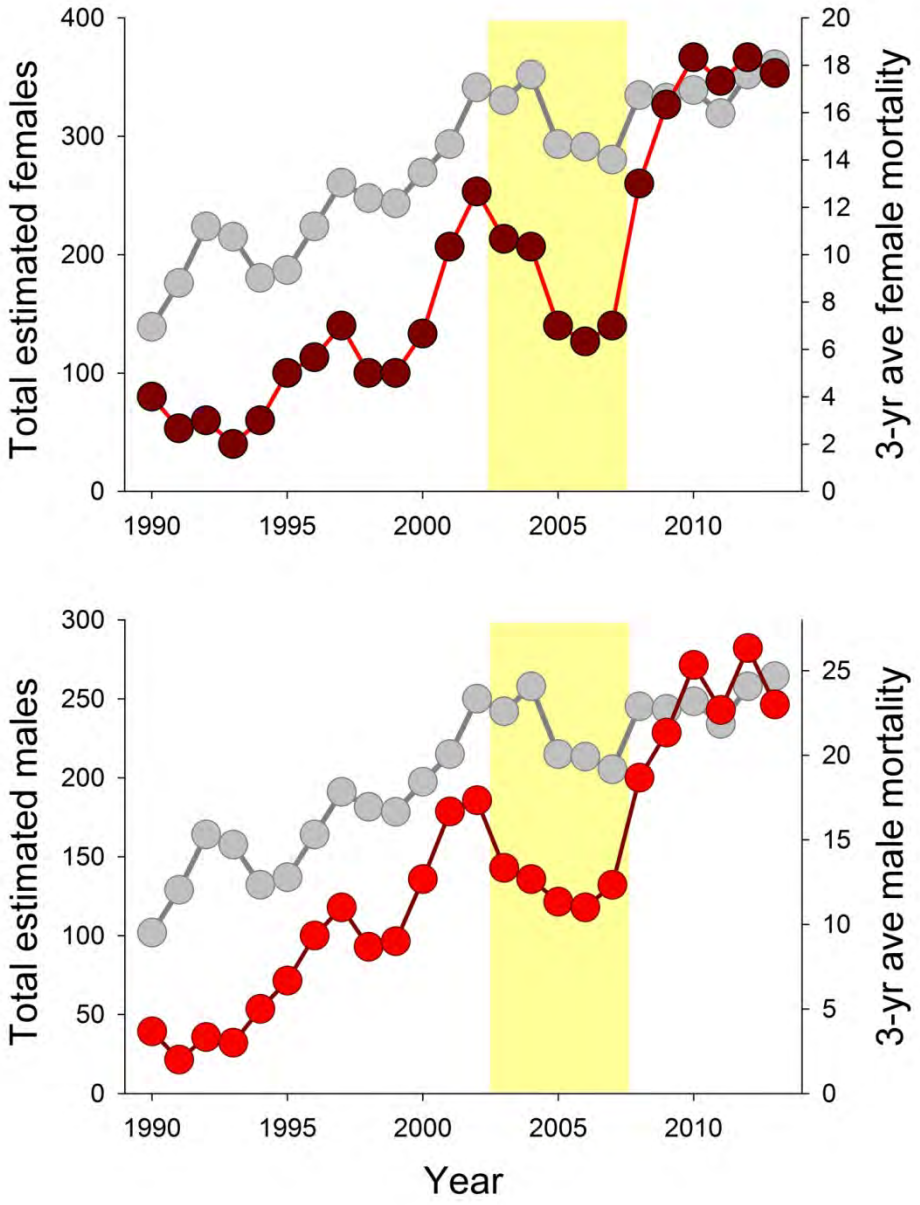

Figure 2. Three-year running averages of total female (top) and male (bottom) deaths, both in shades of red, superimposed on total numbers of male and female bears estimated for the population, shown in gray. Mortalities are from all causes, and with cubs and yearlings for which sex is unknown allocated to the respective sexes based on an assumed 1:1 sex ratio. Total numbers of bears are derived from Chao2-based estimates of population size, and using pre-2012 estimates of population structure. The yellow-shaded area denotes the time period during which maximum losses of whitebark pine occurred. The obvious points to be made here are that mortalities of both sexes increased substantially during recent years at the same time that there was no estimated increase in population size, and immediately after the period when most whitebark pine was lost. These conclusions are robust to any nuances in method.

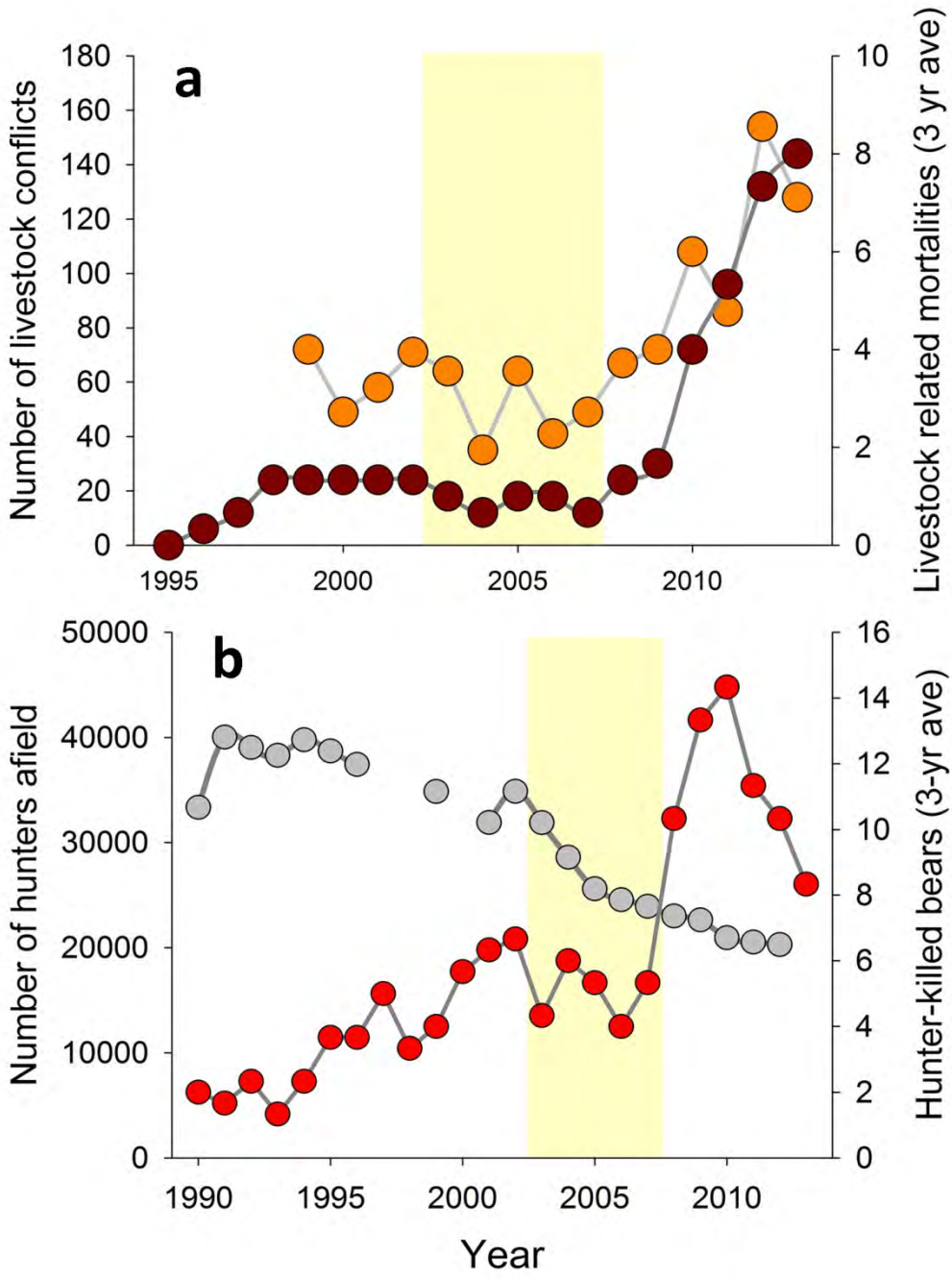

Figure 3. (**a**) Total numbers of livestock-related conflicts, shown by orange dots, and known and probable grizzly bear deaths related to livestock conflicts, shown by dark red dots. Mortality figures represent a 3-year running average. (**b**) Total numbers of grizzly bears known to have been killed, or probably killed, by hunters in association with their hunting activities, shown by the red dots. These activities included camping and traveling while on a hunt. The gray dots denote numbers of sport hunters within or near occupied grizzly bear habitat. As in figure 2, the yellow shaded areas denote the period when most whitebark pine was lost in the ecosystem. The obvious point to be made here is that conflicts and mortalities related to human-associated meat increased dramatically immediately after the period with most whitebark pine was lost.

Exhibit 2

FWS Document ID (if available)	Date of Document	Title of Document	Female Lethal Take Anticipated (or, if lower, allowed before reconsultation)	Language Relied Upon in Determining Female Take
WY4715	7-Mar-03	Proposed Livestock Grazing on the Teton Division of the Bridger-Teton National Forest	1	"The Service anticipates the total loss of 4 grizzly bears (adult or juvenile), with no more than **1** being **adult female**[.]" p.15
WY5998	22-Aug-03	Final Biological Opinion, Proposed Reconstruction of 38 Miles of Highway 287/26 from Moran Junction, Teton County, to easter Shoshone National Forest Boundary, Fremont County, Wyoming	1	"The Service anticipates **1 grizzly bear (adult or juvenile)** could be taken as a result of this proposed action[.]" p.23
WY7403	5-Dec-03	Biological Opinion, Proposed Reconstruction Project, Segment 4 of U.S. 212 (Beartooth Highway), Park County, Wyoming	1	"The Service anticipates **1 grizzly bear (adult or juvenile)** could be taken as a result of the proposed action[.]" p.39
	29-Oct-04	Gallatin National Forest Plan	2	"We anticipate that no more than **two grizzly bears** will be removed from the action area outside of the recovery zone for management purposes related to authorizations made under the Forest Plan during the remaining life of the Forest Plan related to sanitation/food storage and/or livestock grazing." p.43-44.
WY9351	2-May-06	Biological Assessment for Reissuance of Grazing Permits in Grand Teton National Park	1	"The Service anticipates the total loss of **1 grizzly bear (adult or juvenile)** for the life of the grazing permits." p.35
	20-Sep-06	Proposed Gallatin National Forest Travel Plan	0	"The Service is unable to quantify the number of grizzly bears that will be incidentally taken as a result of the proposed Travel Plan." p.64
	24-Dec-09	Gallatin National Forest, Bozeman Municipal Watershed Fuel Reduction	0	"No additional incidental take will be exempted in this biological opinion." p.28
WY10F0196	3-Sep-10	Formal Consultation on the addendum to the Proposed Yellowstone Park Road Reconstruction and Maintenance, 2008-2028, in Park and Teton Counties, Wyoming	6	"[W]e anticipate that no more than **6 grizzly bears (adult or juvenile)** within any consecutive 3-year period, or 36 bears total, will be taken during the remaining 18 years of the 20-year proposed Project." p.18
WY10F0371	24-May-11	Amendment to the Biological Assessment for the Continuance of Livestock Grazing on the Sherman Cattle and Horse Allotment, Bridger-Teton National Forest	3	"The Service anticipates a total of **3 grizzly bear mortalities** as a result of the proposed action." p.20
WY11F0096	21-Jul-11	Re-initiation of Formal Consultation on Grand Teton National Park Transportation Plan/EIS	4	"[T]he Service anticipates up to **four additional grizzly bears** may be incidentally taken directly or indirectly as a result of the Transportation Plan during the remaining 6 years this biological opinion is valid." p.2
WY11F0218	31-Aug-11	Twenty 10-Year Grazing Permit Renewals, Lander Field Office Area, Wyoming	4	"The Service anticipates a total of **4 grizzly bear mortalities** as a result of livestock grazing on these 23 allotments." p.7
	8-Nov-11	Biological Opinion on U.S. Sheep Experimental Station Grazing and Associated Projects, Agricultural Research Services	3	"[A] maximum of **three grizzly bears** over a 10 year period may be taken as a result of the action[.]" p.18

FWS Document ID (if available)	Date of Document	Title of Document	Female Lethal Take Anticipated (or, if lower, allowed before reconsultation)	Language Relied Upon in Determining Female Take
WY11F0246	6-Mar-12	Endangered Species Act Section 7 Consultation, Programmatic Biological Opinion, 2011 Amendment to the 2003 Biological Assessment for Commercial Livestock Grazing on the Shoshone National Forest	7	"The Service anticipates a maximum of 6 grizzly bear mortalities no the North Zone and 10 grizzly bear mortalities on the South Zone as a result of the proposed livestock grazing. … [S]hould grazing activities on these allotments result in the lethal removal of more than **three grizzly bears** within any 2 consecutive years **on the North Zone** or more than **4 grizzly bear**s within any 2 consecutive years **on the South Zone**, the Forest will reinitiate consultation with the Service regarding the specific Zone." p.13
WY11F0215	21-Mar-12	Formal Consultation: Shoshone National Forest Outfitter and Guide Special Use Permits Biological Assessment	3	"The Service anticipates no more than **3 grizzly bear mortalities** in 10 years as a result of the proposed action." p.18
WY112F0135	4-Apr-12	Biological Assessment for Lake Area Comprehensive Plan/Environmental Assessment	4	"[W]e anticipate that no more than … **4 grizzly bears** (adult or juvenile of either gender) will be taken during the 20-year proposed Project[.]" p.22
	28-May-13	Beaverhead-Deerlodge National Forest Land and Resource Management Plan (Revised Forest Plan)	5	"[W]e anticipate that no more than **one grizzly bear** will be removed from the Yellowstone analysis area during the life of the Revised Forest Plan for management purposes related to food and attractant storage issues" (p.85); "[W]e anticipate no more than **one grizzly bear** will be removed from the [West and North Analysis Area ("WNAA")] during the life of the Revised Forest Plan for management purposes related to food and attractant storage issues" (p.86); "[W]e anticipate that no more than **two grizzly bears** will be removed from or killed within the Yellowstone analysis area during the life of the Revised Forest Plan related to livestock grazing or associated activities authorized under the Revised Forest Plan" (p.87); "[W]e anticipate no more than **one grizzly bear** will be removed from or killed within the WNAA during the life of the Revised Forest Plan related to permitted livestock grazing or associated activities authorized under the Revised Forest Plan" (p.88).
WY13F0094	13-Sep-13	Re-initiation of Formal Consultation on Grand Teton National Park and National Elk Refuge Bison and Elk Management Plan/EIS	6	"[T]he Service anticipates up to **4 additional grizzly bears** in the Park and **2 grizzly bears on the Refuge** may be incidentally taken directly or indirectly as a result of the Plan during the remaining 9 years this biological opinion is valid." p.4
WY13F0140	25-Sep-13	Authorize Livestock Crossing Permits (Environmental Asssesment DOI-BLM-WY-020-2013-0026), Cody Field Office Area, Wyoming	1	"The Service anticipates no more than 2 grizzly bear mortalities in 5 years as a result of trailing livestock. … If, during the course of the action, this level of incidental take is reached (**1 grizzly bear mortality** within the 5-year duration of this biological opinion), such **incidental take represents new information requiring re-initiation of consultation** and review of the reasonable and prudent measures required." p.12-13

FWS Document ID (if available)	Date of Document	Title of Document	Female Lethal Take Anticipated (or, if lower, allowed before reconsultation)	Language Relied Upon in Determining Female Take
WY13F0099	20-Nov-13	ESA Section 7 Consultation: Programmatic BiOp: 2013 Biological Assessment for the Revised Shoshone National Forest Land and Resource Management Plan	0	"We conservatively estimate that some low level of incidental take, both lethal and non-lethal, of grizzly bears … may occur on the Forest. However, the amount or extent of take for grizzly bears is unquantifiable at this time." p.23
WY13F0159	7-Feb-14	BA of Commercial Stock Outfitter Concession Contract/Plan Environmental Assessment	2	"The Service anticipates no more than **2 grizzly bear mortalities** in 10 years as a result of the proposed action." p.19
WY14F0040	3-Sep-14	2014 Supplement to the 2013 Supplement and 2010 Amendment to the 1999 Biological Assessment for Livestock Grazing on the Northern Portions of the Pinedale Ranger District	11	"The Service anticipates that a total of **11 grizzly bear mortalities** within any consecutive 3-year period and 18 relocations within any consecutive 3-year period will occur on the nine allotments as a result of the proposed action." p.42
		TOTAL LETHAL FEMALE TAKE ANTICIPATED/EXEMPTED	**65**	