PETITION

Before the United States Department of Agriculture
Animal and Plant Health Inspection Service

September 25, 2012

Requesting Rulemaking to Ensure
the Humane Handling, Treatment, and Care of Captive Bears Under the
Animal Welfare Act

Submitted by

People for the Ethical Treatment of Animals

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I. Introduction

People for the Ethical Treatment of Animals (PETA) submits this petition pursuant to 7 C.F.R. § 1.28 and 5 U.S.C. § 553(e), requesting that the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) commence rulemaking proceedings to amend the regulations in 9 C.F.R. part 3 to provide specific requirements for the humane handling, treatment, and care of captive bears of all species, except polar bears, who are already specifically addressed.

Federal law makes clear that APHIS's responsibilities include the implementation of Animal Welfare Act (AWA or Act) regulations. *See* 7 U.S.C. § 2151 (authorizing the Secretary of Agriculture to promulgate rules and regulations to effectuate the purposes of the AWA); 7 C.F.R. § 2.80(a)(6) (authorizing the APHIS administrator to enforce the AWA). In relevant part, the purpose of such regulations is to "***insure***" the humane handling, care, and treatment of animals by licensees. 7 U.S.C. § 2131(1) (the "regulation of animals and activities as provided in this chapter is necessary . . . to effectively regulate such commerce, in order . . . to insure that animals intended for use in research facilities or for exhibition purposes . . . are provided humane care and treatment") (emphasis added). However, as the USDA has acknowledged, the generic regulations (9 C.F.R. part 3, subpart "F") are not always sufficient to fulfill this purpose—and new regulations must therefore be implemented to keep up with evolving scientific knowledge about what constitutes "humane" treatment under particular circumstances, or for a particular type of animal with unique needs. *See infra* Parts IV.B and VII.

Currently, there are over 500 active USDA licensees with bears: 485 class-c exhibitors, 34 class-b dealers, 9 class-a breeder-dealers, and 9 research facilities.

Roadside zoos account for the vast majority of USDA licensees with bears in their animal inventories. As demonstrated herein, compelling scientific evidence gathered over the past two decades shows that the generic regulations in subpart F are inadequate to insure humane handling, treatment, and care of bears as required by the AWA—particularly at roadside zoos where bears are forced to live in deplorable conditions in contravention of the most basic bear husbandry standards. *See infra* Part V.C. PETA therefore requests that APHIS initiate rulemaking proceedings to establish regulatory specifications that comply with the intent and purpose of the AWA to "insure" the humane handling, care, and treatment of these animals.

Proposed regulatory language is included below in Part VIII, after an explanation of the legal and factual bases for this request. Some of the key features of the requested regulations include:

- a prohibition against keeping bears in pits or similar sensory-depriving conditions as a primary enclosure;
- environmental enrichment requirements that provide for means of expressing typical behavior including hibernating where appropriate, foraging, running, climbing, digging, and nest building;
- den and pool requirements in accordance with currently accepted professional standards.

Petitioners also request that APHIS hire a full-time specialist with knowledge, background, and experience in the proper husbandry and care of bears to oversee the proper implementation and enforcement of these regulations.

II. Description of Petitioner

PETA is the largest animal rights organization in the world and operates, in part, under the principle that animals are not ours to use for entertainment. Since its inception,

PETA has championed ending the use of wild and exotic animals for human amusement, including the use of bears in antiquated roadside zoos. In addition, some of PETA's members have aesthetic, recreational, educational, and emotional interests in bears, make efforts to see these animals in captivity, and are harmed by seeing captive bears in substandard conditions at USDA-licensed facilities.

III. Statutory and Regulatory Framework

Congress implemented the AWA to, in relevant part, "insure" that animals used for exhibition are provided humane care and treatment. *See* 7 U.S.C. § 2131(1) (statement of Congressional intent). Regulations established under the AWA are contained in the Code of Federal Regulations (CFR) in 9 CFR parts 1, 2, and 3. Part 1 contains definitions for terms used in parts 2 and 3; part 2 provides administrative requirements and sets forth institutional responsibilities for regulated parties; and part 3 contains specifications for the humane handling, care, and treatment of animals covered by the AWA.

The regulations in part 3 consist of six subparts. Subparts A through E contain specific standards for: dogs and cats (subpart A, 9 C.F.R. §§ 3.1 – 3.12), guinea pigs and hamsters (subpart B, *id.* §§ 3.25 – 3.33), rabbits (subpart C, *id.* §§ 3.50 – 3.58), nonhuman primates (subpart D, *id.* §§ 3.75 – 3.85), and marine mammals, including polar bears (subpart E, *id.* §§ 3.100 – 3.111). Subpart F sets forth general standards for all other warm-blooded animals not otherwise specified in part 3.

For the reasons demonstrated in Sections IV.B, *infra*, captive bears—due to their unique biology and dependence on a diversity of ecological resources in the wild—require special handling and care. It has become apparent that the general standards in

subpart F of part 3 are insufficient to ensure that bears receive such care, and thus fail to comply with the AWA's mandate for ensuring the humane handling, care, and treatment of bears in captivity.

The requested rulemaking would amend part 3, subpart F by adding specific standards for bears, excluding polar bears.

IV. Arguments in Support of Requested Action

A. Summary

This petition is grounded in the basic notion—repeatedly acknowledged by the USDA—that "[t]he purpose of the AWA is to ***ensure*** that animal[s] used in research facilities or exhibition purposes are provided humane care and treatment." *See, e.g.*, 74 Fed. Reg. 30502-01 (Jun. 23, 2009) (emphasis added). Compelling scientific evidence shows that the current regulations do not "ensure" humane care and treatment of bears. Since the regulations fail to meet the AWA's purpose, they must be changed.

B. The Requested Action Is Necessary Because the Current Regulations Do Not Ensure the Humane Handling, Care and Treatment of Captive Bears

APHIS has promulgated generic regulations for exhibited animals, set forth at sub-part F of the AWA Regulations, titled "Specification for the Humane Handling, Care, Treatment and Transportation of Warm Blooded Animals Other Than Dogs, Cats, Rabbits, Hamsters, Guinea Pigs, Marine Mammals, and Nonhuman Primates." 9 C.F.R. §§ 3.125 – 3.142. These regulations generically cover the handling, care, and treatment for species as diverse as giraffes, prairie dogs, zebras, and bears. They provide minimum standards and are very broadly worded, dealing with matters such as food, water, and sanitation. Significant advances over the last two decades in the scientific knowledge

about bears and their unique needs in captivity have demonstrated that APHIS's generic regulations contained in subpart F are insufficient to "ensure" that the bears' basic needs are met. For example, the "realization that bears have complex behavioural requirements, that their enclosure and husbandry systems must provide an outlet for, was slow in coming. ***Now, however, it is recognized that bears are every bit as demanding as primates and require intense husbandry routines to keep them in good mental and physical condition."*** (Law and Reid 2010 (emphasis added)).

In recognition of the need for special expertise when inspecting licensees who keep particularly complex species, APHIS employs an elephant expert, a marine mammal expert, a primate expert, a bird expert, an exotic cat expert, and has created a special traveling exhibitor inspection team. Chester Gipson, deputy administrator for APHIS animal care, has represented that the agency has considered adding a bear expert to its cadre of inspectors and veterinarians with expertise in particular species, and we specifically request that the agency do so.

It is widely recognized in the scientific community that bears are especially susceptible to abnormal (stereotypic) behaviors such as pacing and other repetitive behaviors caused by a lack of sensory stimulation, associated with poor welfare and suffering. Yet, the AWA currently has no provision for environmental enrichment for bears.

The absence of bear-specific regulations has also created enforcement challenges due to a concomitant lack of guidance to inspectors and the regulated parties. [*See, e.g.*, Exhibit 1 (APHIS Inspection Report from Dec. 16, 2009, noting that bear dens at the inspected facility "seem kind of small" but noting that "since they are [governed by]

subpart F I don't feel comfortable citing space issues. . . .")]; Exhibit 2 (APHIS Inspection Notes from Nov. 30, 2009, mistakenly assuming a bear's stereotypic pacing was "exercise").

Research demonstrates that much of the stress, disease, and high-risk behavior of bears maintained in substandard facilities could be significantly reduced by providing an opportunity for the bears to express typical behaviors that they are largely denied in roadside zoos. To meet the AWA's welfare mandate, subpart F must be augmented with specific regulations that address bears' particular physiological and psychological needs.

Consistent with the current scientific knowledge, captive bears must—at a minimum—have appropriate shelter, and opportunities to forage, climb, explore, dig, cool themselves or bathe in a pool, and seek privacy. They must also be provided with an appropriate behavior-based diet that considers their seasonal nutritional needs, and be given the materials and choice to nest, den, and hibernate. While there are currently 485 class-c exhibitors with bears in their animal inventories, there are only 177 zoological facilities in the United States accredited by the Association of Zoos and Aquariums (AZA), not all of which house bears. Therefore, the number of licensees housing bears in accordance with AZA accreditation standards is only a fraction of the total number of licensees housing bears in the United States. The overwhelming majority of captive bears in the U.S. are being housed by roadside zoos that do not adhere to minimum bear husbandry standards and force bears to live in conditions that not only fail to meet the bears' most basic needs, but are associated with serious health problems and psychological suffering.

C. The Requested Action Is Consistent with the USDA's Interpretation of the AWA, Which Requires Regulations to Evolve with Scientific Knowledge to "Ensure" the Humane Treatment of Animals

Because our knowledge of animals in captivity is constantly evolving, the USDA has recognized that the question as to whether current regulations are adequate to "ensure" the humane treatment of animals must be answered based on current "general, industry, and scientific knowledge and experience." *See, e.g.*, UNIFIED AGENDA USDA Animal and Plant Health Inspection Service (APHIS) (Dec. 20, 2010), 75 Fed. Reg. 79715-02 (Exhibit 3).

For example, in 1979, the USDA promulgated regulations for marine mammals, including polar bears, under the AWA, which it amended in 1984. *See id.* Cognizant of the fact that "advances continue to be made, new information developed, and new concepts implemented with regard to the handling, care, treatment, and transportation of marine mammals in captivity," the USDA subsequently revisited these standards "to determine what amendments, if any, are necessary." *See* PROPOSED RULES DEP'T OF AGRIC. Animal and Plant Health Inspection Service 9 CFR Parts 1 and 3 [Docket No. 93-076-17] (May 30, 2002), 67 Fed. Reg. 37731-01 (Exhibit 4).

Citing "advances . . . and new information" with regard to the housing and care of marine mammals," the USDA initiated rulemaking in the 1990s to address "standards affecting variances, indoor facilities, outdoor facilities, space requirements, and water quality, as well as swim-with-the-dolphin programs." *See* UNIFIED AGENDA, Department of Agriculture (Dec. 20, 2010) 75 Fed. Reg. 79715-02 (Exhibit 5).

Effective February 2, 2001, the USDA amended the AWA regulations to provide additional species-specific standards for marine mammals (including polar bears) in captivity, because it concluded—"***based on current general, industry, and scientific knowledge and experience"—that such standards were "necessary to ensure that the minimum standards for the humane handling, care, treatment, and transportation of marine mammals in captivity***." *See* RULES and REGULATIONS, USDA APHIS 9 CFR Part 3 [Docket No. 93-076-15] (Jan. 3, 2001), 66 Fed. Reg. 239-01 (emphasis added) (Exhibit 6).

As the USDA explained in support of this amendment, "[d]uring the 14 years since the standards were amended, advances have been made, new information has been developed, and new concepts have been implemented with regard to the handling, care, treatment, and transportation of marine mammals in captivity." *Id.*

Similar concerns over the inability of subpart F to ensure the welfare of rats and mice caused the USDA to solicit comments to help determine whether it should continue to regulate the care of rats and mice "under the general standards in subpart F of part 3, or if [the USDA] should adopt specific standards for those animals." *See* PROPOSED RULES Department of Agriculture Animal and Plant Health Inspection Service 9 CFR Parts 2 and 3 [Docket No. 98-106-4] Animal Welfare; Regulations and Standards for Birds, Rats, and Mice (June 4, 2004), 69 Fed. Reg. 31537-02 (Exhibit 7).

Likewise, prompted by evolving scientific knowledge of birds, the USDA has stated that, as a result of their diversity, "birds maintained in captivity often ***require unique husbandry and care. For this reason, we do not believe that the general standards in subpart F of part 3 would be appropriate or adequate*** to provide for the

humane handling, care, treatment, and transportation of birds." *Id.* (emphasis added). (AWA regulations pertaining to birds are pending before the agency.)

Identical considerations apply with respect to bears: because they require unique husbandry and care, the current general standards in subpart F do not adequately provide for the humane handling, care, treatment, and transportation of bears.

In addition to recognizing that subpart F as currently drafted may not suffice to ensure the humane treatment of certain types of animals with unique husbandry and care requirements, the USDA has recognized that subpart F may not suffice to ensure the humane treatment of animals with certain characteristics or under certain circumstances. For example, the USDA proposed to amend the AWA by adding minimum age requirements for the transport of animals in commerce (regulations establishing such requirements are pending before the agency). The USDA explained that the regulations "currently contain such requirements for dogs and cats, but no corresponding ones for other regulated animals, despite the risks associated with the early transport of these species." *See* 73 Fed. Reg. 26344-01 (May 9, 2008) (Exhibit 8); 75 Fed. Reg. 79719-01 (Dec. 20, 2010) (Exhibit 9). Implicitly acknowledging that the standards in subpart F do not take into account (and failed to provide for) the unique needs of certain animals, the USDA noted that the ***amendments were "necessary to help ensure the humane treatment of these animals***" and would "reduce[] [the] risk of inhumane treatment of young and unweaned animals." 73 Fed. Reg. 26344-01 (May 9, 2008) (Exhibit 8); 75 Fed. Reg. 79719-01 (Dec. 20, 2010) (emphasis added) (Exhibit 9).

V. The Needs of Bears and the Current State of Captive Bears in the U.S.

A. Introduction

The practice of keeping bears in captivity dates as far back as 4400 years. It was not understood until relatively recently that bears suffer more than many other animals from confinement. Today, however, "the requirements of animals in zoos are better understood and ***it is recognized that bears are extremely difficult and challenging creatures to manage in the captive environment***." (Law and Reid 2010 (emphasis added); *see also*, Ross 2006).

It is now acknowledged in the scientific literature that, as a family, bears are particularly likely to suffer in captive environments that do not provide adequate space, enrichment, socialization, or husbandry. Mounting evidence over the past two decades has shown that these long-lived animals, who may live up to three decades, even in deprived and neglectful captive conditions, suffer greatly from the effects of living in small spaces with inadequate sensory stimulus or enrichment. Many animal care professionals at AZA-accredited facilities have incorporated this information into their captive bear husbandry practices to help maintain mentally and physically healthy bears. However, most roadside zoos and many other licensed facilities have failed to incorporate currently accepted minimum professional standards into their bear husbandry practices.

The need for specific regulations that take into account bears' natural behavior is graphically demonstrated by the manner in which many captive bears are currently kept in roadside zoos (many of which are associated with the deceptively-named Zoological Association of America (ZAA)), and by the detrimental impact that inadequate husbandry practices and conditions have on the bears' physical and mental wellbeing. Bears kept in antiquated "bear pits" and similar barren environments are prone to aberrant and

stereotypic behaviors, recognized signs of poor welfare. On the other hand, research has shown that developing captive bear habitats that mimic wild bear habitats, and engaging in husbandry practices that accommodate species-typical behavior, can result in marked and tangible improvements in captive bear welfare. While the morphology and behavior of bears varies somewhat between species, the complex dietary, behavioral, psychological social and space requirements for all bears warrant the establishment of bear-specific regulations necessary to meet the minimum husbandry requirements for all bears. Consideration of minimally-acceptable requirements may be informed by a brief review of the habitats, behavior, social structure and dietary needs of bears in the wild.

B. Bears in the Wild

Bears are intelligent and energetic animals who need large tracts of undisturbed, nourishing land in the wild in order to survive. Home range sizes for bears can vary from dozens to thousands of square miles. In spring and early summer, when bears forage on plants and dig for roots or rodents, they roam throughout their habitats in search of food. During this season, for example, American black bears in the southern Appalachians cover distances of about 5 miles per day. In the fall, their daily movements range from 3 to 4 miles. (L. Kolter et al.). Studies done in Sri Lanka have revealed that even sloth bears, who have among the smallest home ranges of the various bear species, have home ranges of 5 to 9 square miles. (Ratnayeke 2007).

Bears in the wild spend their days foraging for seasonal foods, finding suitable shelter, gathering nesting and denning materials, constructing daybeds and dens, searching for mates, and teaching their young. (Croke 1997; Seibert 1995; Palomero, *et al.* 1997; Gupta 2007). They use their senses of smell and sight to locate food, find a

mate, and to detect danger. With their strong forepaws and claws, bears climb, dig and rake through vegetation, excavate, lift and turn over boulders, and capture small animals or insects. (Lariviere 2001). Bears are largely opportunistic feeders who are constantly investigating and testing their environment. (Carlstead *et al.* 1991). In pursuit of a meal, a brown bear, for example, might fish for salmon, dig up a ground squirrel, pick berries, or hunt down a deer (Law and Reid 2010). Bears carefully manipulate plants with their paws, tongue and teeth to remove the edible parts and are able to extract eggs from nests with such dexterity that their fragile shells remain intact (Law and Reid 2010).

Depending on the season and geographic location, bears spend up to 75% of their time foraging. (Garshelis *et al.* 1980). Bears consume a wide range of foods that are seasonally available. Typically, food items are patchily distributed over a large range and require extensive time to collect and consume. (Carlstead and Seidensticker 1991; Garshelis and Pelton 1980). In the wild, bears will gather fruit, berries, nuts, grass herbs and grain from the ground, tear up berry patches, turn over rocks and tear up rotting logs to reach for grubs, larvae and insects. In addition to eating carrion, bears will prey on ungulates and fish, using their paws and teeth. Brown bears also dig for ground-dwelling rodents. (Bourne 1992; Lariviere 2001; Carlstead *et al.* 1991). Despite particular myrmecophagous adaptations—including narrow snouts and long tongues—of sloth bears for purposes of consuming insects like ants and termites, foraged fruit and other vegetative matter comprises a substantial part of the sloth bear's diet. (Sreekumar and Balakrishnan 2002; Ratnayeke, et al. 2007). Similarly, in the wild, spectacled bears eat a diet that is made up almost exclusively of fruit and vegetation and studies have shown

that captive spectacled bears prefer and thrive better on a plant-based diet rather than one based on animal protein. (Peyton 1980).

When not foraging for food, bears are often engaged in digging dens and building nests on the ground or in trees, using a variety of materials, including dirt and plant matter. (Garrison 2004; Reynolds-Hogland *et al.* 2007). They are so hardwired genetically to perform denning and nesting activities that even bears orphaned at a young age who have never been exposed to den selection or construction processes instinctively construct dens. (Palomero, *et al.* 1997). They also seek bodies of water to cool off and to bathe, play, and fish in.

In addition to their daily routines, bears follow seasonal routines. (Garshelis and Pelton 1980). The physiology and behavior of bears are highly adapted to seasonally changing food supplies. (Carlstead and Seidensticker 1991; L. Kolter et al). In the southeastern U.S., black bears become inactive and den up for the winter, as do brown bears in countries with warmer climates. (L. Kolter et al.; Garshelis and Pelton 1980). In northern areas of the U.S. and Canada, bears may hibernate as long as eight months without moving from their den. (Jones 1999). Bears can come and go from their dens in the winter during warmer periods but they do not usually engage in major foraging activity at this time. While denning, bears undergo numerous metabolic changes, cease ingressive and eliminative functions, and are in a lethargic state or deep sleep. (Lariviere 2001; Nelson, *et al.* 1983; Garrison 2004). Thus, the opportunity to hibernate and den provides important physiological functions for bears.

Denning serves an important biological function of renewal for the bear. These effects are not yet fully understood by scientists, but they include, for instance, foot pad

sloughing. Although in warmer climates there are a few bears that choose not to den for an entire season, each wild bear has the freedom to assess his or her own biochemistry and has the ability to determine whether or not to go through a winter without hibernating. (Laidlaw *et al.* 2010).

Winter dens for some bear species may be underground burrows and cavities in trees or rocks, brush piles, root excavations, underground burrows, or open-ground beds. Some bears line their den chambers with vegetation and completely or partially plug their den's entrance. (Lariviere 2001). In the wild, bears have been observed changing den locations up to four times in a single winter, and scientists believe that security is a significant factor affecting choice of den sites. (Lariviere 2001). When choosing den locations, brown and black bears in the wild show a preference for remote, elevated den sites, removed from human disturbances. (Reynolds-Hogland, *et al.* 2007). American black bears often abandon winter dens following a disturbance. (Lariviere 2001).

C. Bears in Captivity

Bears are more likely to suffer in captivity than most animals if not adequately provided for. The specific behavioral, dietary and physiological characteristics of bears render them particularly vulnerable to welfare problems in captivity and thus in need of special attention (Clubb and Mason 2003; Ross 2006; *see also supra*, Section IV.B). It has been widely noted in the scientific literature that bears' instinctive curiosity, great strength and dexterity, and capacity for rooting about, exploring, and destroying, require that they receive more specialized care than many other species in captivity. (Clubb and Mason 2003). Studies show that wide-ranging species such as bears are most likely to suffer from stress and psychological dysfunction in an inadequate captive environment

and to "fare badly" in such environments. (Clubb and Mason 2003; Clubb and Mason 2006; Ross 2006; *see also infra* Section V.C.3.).

When confined in enclosures without room to dig, forage, and engage in other bear-specific behaviors, bears quickly become stressed, frustrated, and bored. Subsequently, they develop aberrant and stereotypic behaviors. Bears with insufficient space or opportunities for foraging and food handling are especially prone to stereotypies, which are considered signs of poor welfare and suffering. (Shepherdson 2003; Swaisgood 2005; Vickery and Mason 2004; Carlstead and Seidensticker 1991; Clubb and Mason 2003; Anderson, *et al.* 2010; Shyne 2006; Ross 2006).

American black bears, Asiatic black bears, and brown bears—whose lives can span decades—are among the species most commonly found in captivity in the United States. Overwhelming evidence, summarized below, indicates that, at a minimum, the welfare of bears must be better protected through specific regulations requiring environmental enrichment and other species-appropriate husbandry practices.

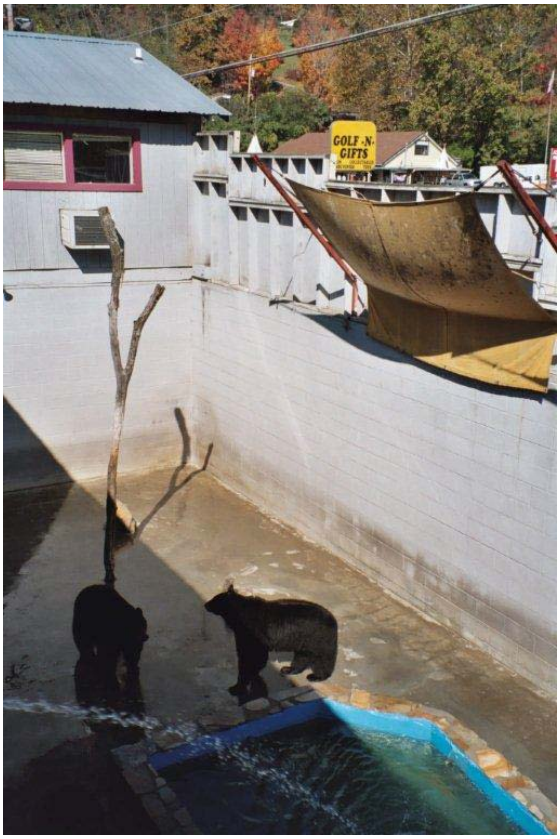
1. Antiquated enclosure designs

The practice of exhibiting bears in barren pits, undersized cages or grottoes dates back to ancient Rome, and can still be seen today in roadside zoos across the country such as the Chief Saunooke Bear Park (55-C-0125), Cherokee Bear Zoo (55-C-0118), and Santa's Land (55-C-0238) in Cherokee, North Carolina; Black Forest Bear Park (57-C-0176) in Helen, Georgia; Yellow River Game Ranch (57-C-0029) in Lilburn, Georgia; Clark's Trading Post (12-C-0001) in New Hampshire; the Ober Gatlinburg Bear Exhibit (63-C-0021) in Gatlinburg, Tennessee; the Three Bears Gift Shop (63-C-0103) in Pigeon Forge, Tennessee; Jim Mack's Ice Cream (23-C-0224) in York, Pennsylvania; Brown's

Oakridge Exotics (33-C-0007) in Smithfield, Illinois; Predators in Action (93-C-0350) in Big Bear City, California; Everglades Wonder Gardens (58-C-0483) in Bonita Springs, Florida; Waccatee Zoo (56-C-0230) in Myrtle Beach, South Carolina; Natural Bridge Zoo (52-C-0035) in Natural Bridge, Virginia; Maple Lane Wildlife Farm (32-C-0178) in Topeka, Indiana; and Forest Park Zoo (14-C-0003) in Springfield, Massachusetts.[1]

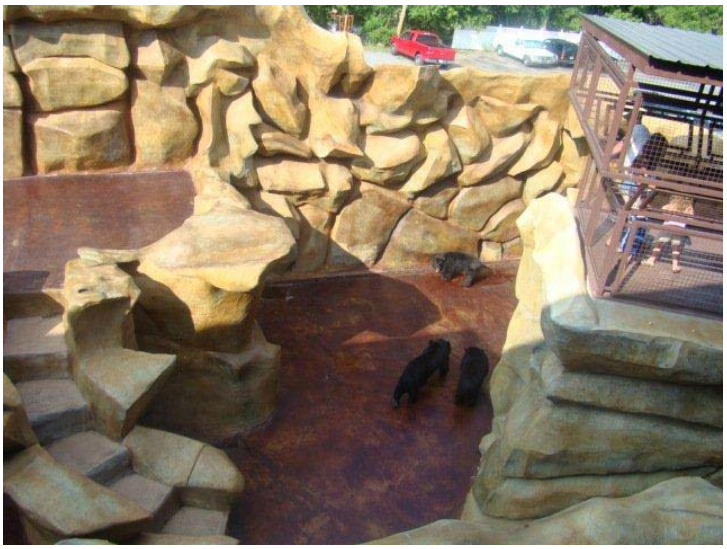
Bears Kept in Barren, Wet Pit at the Chief Saunooke Bear Park in Cherokee, NC (License No. 55-C-0125)

[1] As discussed *infra*, at VII., a state court judge recently found that Jambbas Ranch, a roadside zoo in Fayetteville, NC (55-B-0177) was subjecting the bear at its facility to "unjustifiable physical pain and suffering" in violation of North Carolina cruelty to animals laws and ordered the bear's immediate transfer to a reputable sanctuary. Jambbas Ranch has been permanently prohibited from acquiring any new bears.



Bears Kept in Wet, Barren Pit at the Cherokee Bear Zoo in Cherokee, NC (License No.55-C-0118)

Bears Kept in Barren, Concrete Pit at the Black Forest Bear Park in Helen, GA (License No. 57-C-0176)



Bears Kept in Barren, Concrete Pit at the Three Bears Gift Shop in Pigeon Forge, TN (License No. 63-C-0103)

These simplistically designed enclosures were not built to accommodate the bears' natural behavior—but to provide cheap, ostensibly safe, human entertainment. Bear enclosures consisting of nothing but concrete floors and walls, rocks and a tiny pool, are no longer considered appropriate because they do not simulate the natural environment or allow the bears to engage in bear-specific behaviors. (Laidlaw, *et al.* 2010; Montaudouin and Le Pape 2005; Gupta 2007; Fischbacher and Schmid 1999; Law and Reid 2010; Ross 2006; Bradshaw 2011).

These "pits" and similar substandard enclosures lack any relation to the wild ecology of bears and thus fail to meet the bears' instinctive need to roam and explore. Living in these antiquated surroundings means living in a world bereft of visual, tactile, or olfactory stimulation. Too many bears are deprived of the ability to express their natural behaviors or to seek privacy from the public or their cage mates.

Multiple Bears Exhibited in a Small, Unnatural, Concrete and Chain Link Cage at Santa's Land in Cherokee, NC (License No. 55-C-0238)

Multiple Bears Exhibited in Small, Unnatural Concrete and Chain Link Cage at Everglades Wonder Garden in Bonita Springs, FL (License No. 58-C-0483)

Simply put, nothing in nature prepares a bear to live in an environment as alien, hostile, and austere as a cement pit or slab, and the consequences on the bears' mental and physical health are predictably dire (*see infra* V.B).

2. Insufficient space

Research has shown that bears are at particularly great risk for developing aberrant behaviors and stereotypies when their appetitive drive is thwarted by being kept in an inappropriate captive environment. One of the threshold obstacles preventing bears from engaging in normal behavior patterns in captivity is the small spaces in which they are typically confined at roadside zoos and similar licensed facilities. (Carlstead and Seidensticker, 1991; Clubb and Mason, 2003; Clubb and Mason 2006; Montaudouin and Le Pape 2005; Ross 2006). In contrast to the wide open spaces they inhabit in the wild, captive bears at these facilities usually spend their lives in small enclosures the sizes of which seem based more on convenience and financial considerations than on the bears' biological needs. When compared to the minimum home ranges of bears in the wild, the living spaces of the bears at most captive facilities are orders of magnitude smaller.

For example, at the Cherokee Bear Zoo located in Cherokee, North Carolina, two brown bears are housed in a pit-style enclosure that measures approximately 14 feet (4.26 meters) by 20 feet (6.09 meters)—a remarkably tiny 280 square feet (25.94 square meters). This enclosure is not adequate as a temporary holding facility, let alone suitable for permanent housing. Two adjacent enclosures at this facility, one housing another two brown bears and the third holding two American black bears, are approximately 560 square feet (51.88 square meters), while the remaining enclosure housing four American black bears is approximately 54 feet (16.45 meters) by 20 feet (6.09 meters), or 1080 square feet (100.18 square meters). (Laidlaw, *et al.* 2010). Similarly, at Jambbas Ranch, a roadside zoo in Fayetteville, North Carolina, a bear was held in a chain link and cement enclosure that was just 12 feet (3.66 meters) by 22 feet (6.7 meters), or 264 square feet

(24.52 square meters) until local citizens filed a civil cruelty to animals lawsuit and obtained a court order requiring Ben's immediate transfer to an reputable sanctuary. (Bradshaw 2011; *see also infra* VII).

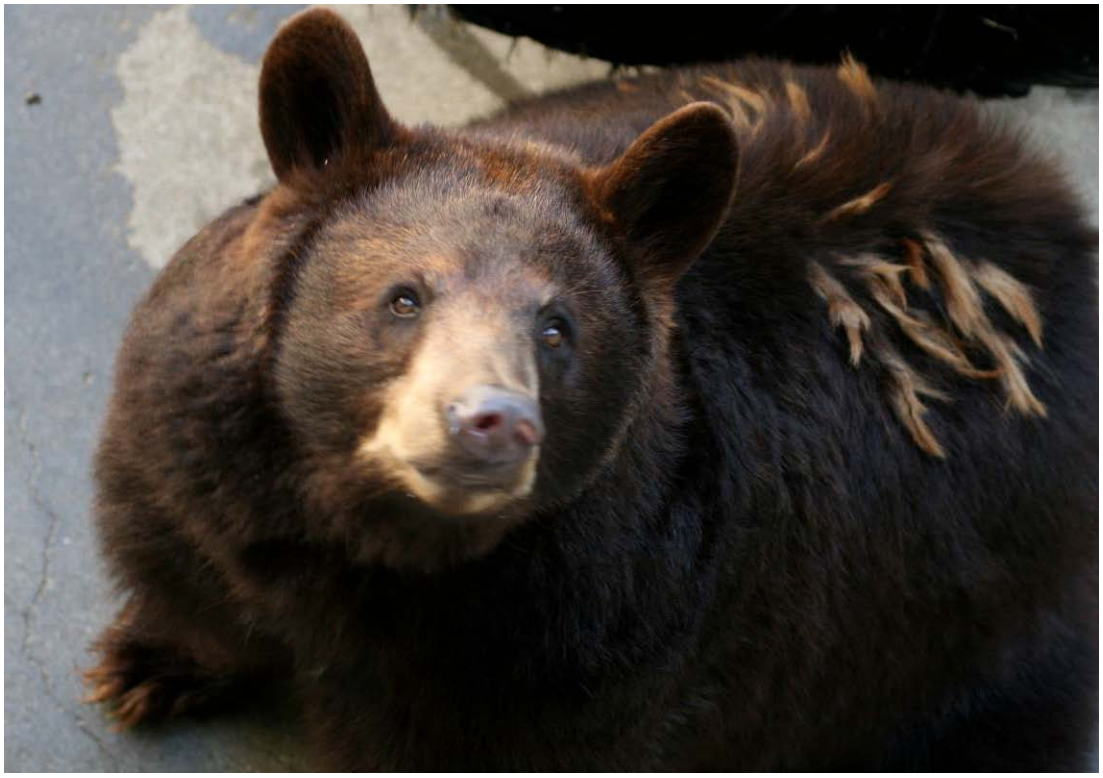
Ben the Bear Was Housed in a Virtually Barren, Often Wet, 12' x 22' Concrete and Chain-Link Cage at Jambbas Ranch in Fayetteville, NC for Six Years

Highly intelligent and energetic animals, bears suffer demonstrably from being forced to live in such close confinement. Living in a compressed space severely limits or precludes a bear's ability to engage in natural behaviors that are essential to their physical and psychological health. Among the ill effects that have been observed as a result of confinement in inadequate space are decreased muscle mass, depressed cardiovascular health, foot and skeletal issues, and obesity, as well as frustration, anxiety, and boredom, evidenced by prolonged periods of inactivity, stereotypic behavior, and/or other abnormal behaviors (discussed more fully in the next section). To meet minimum bear husbandry standards, captive bears *must* be afforded sufficient space to meet their physical, social,

behavioral, and psychological needs, including opportunities for walking, running, resting, climbing, nest building, denning, social behaviors, privacy behaviors, play, foraging, investigatory behaviors, enrichment programming, and mental stimulation.

3. Lack of sensory stimulation and enrichment

Bear-specific enclosure design is the key to mental and physical stimulation for bears. Therefore, the detrimental effects of living in an inadequate space are compounded by the fact that many non-AZA accredited, USDA-licensed, facilities provide bears with virtually no environmental enrichment, cage furnishings, or other stimulation to compensate for the flaws of the enclosure design. Facilities often lack suitable substrates—such as mulch, soil, bark, leaves, straw, pebbles—or other functional structural enhancements or furnishings to provide tactile, sensory or cognitive enrichment, thus preventing the bears from fulfilling their behavioral need for foraging, investigating, manipulating, digging, and constructing day beds. (Montaudouin and Le Pape 2005; Fischbacher and Schmid 1999). This also prevents the bears from grooming by rubbing their fur on trees, logs, or other natural objects, which is essential during seasonal shedding and for the daily maintenance of a healthy coat and skin. (Laidlaw, *et al.* 2010). Bears who are denied the ability to shed their heavy winter coats prior to searing summer weather may experience overheating and skin irritation.



This bear at Chief Saunooke Bear Park in Cherokee, NC has matted fur and has not shed out properly because there is a lack of appropriate surfaces to rub against.

This bear exhibited at Jim Mack's Ice Cream in York, PA has large clumps of matted fur clinging to her in late July because the cage has no pool and nothing for her to rub against to help her shed properly.

Many roadside zoos and similar facilities also neglect the special needs of young bears, despite the fact that bear cubs require especially rich and complex living environments for the proper development of their brain and body. At such facilities, young bears have little to do except pace from side to side, or sit, lie, or sleep on the concrete floor. (Bradshaw 2011). Many roadside zoos also remove bear cubs from their mothers before the age of natural weaning or dispersal, which is inconsistent with minimum acceptable bear husbandry standards. For example, the Tote-em-in-Zoo (a/k/a Tregembo Animal Park; license #55-C-0183, former license #55-C-0101) has sold bear cubs as young as only *two or three months old* to backyard menageries. (Vaughn 2007) (Exhibit 10). Kenneth Hetrick of Tiger Ridge Exotics (license #31-C-0048) in Perrysburg, Ohio, has advertised young grizzly bear cubs for sale in the *Animal Finders' Guide*, a trade publication that caters to hunting ranches, dealers, breeders, and others who profit off of the exotic pet trade. *See, e.g.*, *Animal Finders' Guide*, Vol. 24, Issue 5 (April 1, 2007) (Exhibit 11) ("Russian grizzly bear cubs born 1-09-07, still with mother, $1500. Also one and two year old cubs, very tame and handleable. Sell or trade."). Notorious roadside zoo operator Joe Schreibvogel, d/b/a G. W. Exotics (license #73-C-0139), based in Wynnewood, Oklahoma, has also utilized the *Animal Finders' Guide* to sell black bear cubs--*some as young as only 9 weeks old*. *Animal Finders' Guide*, Vol. 25, Issue 8 (June 1, 2008) (Exhibit 12) ("Nine week old black bear cubs, two females, $500 each. You may pick up or pay for shipping."). Bear cubs are born with the genetic need for their mothers to feed, protect, nurture, teach and play with them for at least 1.5-2 years. Denying a bear cub her innate needs through premature maternal separation may cause her undue stress, confusion, depression, or even disease.

Wildlife biologists have warned of the detrimental effects that sensory deprivation has on animal welfare. One of these effects is the development of stereotypic behavior. Animals exhibiting repetitive behaviors such as pacing and head swinging and have been associated with "reduced behavioral diversity, decreased responsiveness to environmental stimuli, reduced exploratory behavior, poor maternal competence, injury" and poor physical condition. (Vickery and Mason 2005). Compared to their non-stereotypic counterparts, animals exhibiting stereotypies also have altered brain chemistry, for example showing "alterations in dopamine, serotonin, and opioid functioning." (Vickery and Mason 2005). Stereotypies and other aberrant behaviors are caused by inadequate treatment, housing and handling of captive animals, including lack of stimulation, inadequate space, and inappropriate social groupings. (Shyne 2006). Although many animals in captivity are known to develop such abnormal behavior patterns, bears are at a particularly great risk of developing them, for the reasons previously noted. (Shyne 2006; Carlstead and Seidensticker 1991; Vickery and Mason 2003; Ross 2006).

The prevalence of stereotypic behavior in captive bears has been associated with substandard conditions and poor welfare. (Carlstead and Seidensticker 1991; Vickery and Mason 2003; Forthman *et al.* 1992; Ames 1994; Fischbacher and Schmid 1999; Anderson *et al.* 2010; Ross 2006). Such behavior has been reported in all bear species, including American black bear (Carlstead and Seidensticker 1991), sloth bear (Forthman and Bakeman 1992; Anderson *et al*. 2010), spectacled bear (Fischbacher and Schmid 1999), Asiatic black bear (Forthman *et al.* 1992), and the giant panda (Swaisgood *et al.* 2001).

Pacing is among the most frequently observed stereotypic behaviors in bears. (Carlstead and Seidensticker 1991). Other common stress responses include head-rolling or head-swinging, weaving, self mutilation, rubbing against or gnawing bars, which can lead to painful dental diseases (Wenker *et al* 1999), tongue flicking, excessive grooming, fur loss, and apathy. (Carlstead and Seidensticker 1991; Hennessy 1996; Ross 2006).

As mentioned previously, bears who are denied adequate space, socialization, and enrichment are notorious for their stereotypic behavior. (*See supra*; *see also* Swaisgood and Shepherdson 2005; Anderson *et al.* 2010; Vickery and Mason 2003). For example, in a study of 33 carnivorous species, ***bears displayed both the highest frequency and maximum prevalence compared to other families.*** (Vickery and Mason 2003; Clubb 2001). This high incidence of stereotypic behavior in captive bears compared to that of other captive animals indicates that bears are often kept in unsuitable environments that lack essential stimuli for expressing the normal behaviors of their wild counterparts (Carlstead and Seidensticker 1991)—and that bears are therefore in a particularly urgent need of protection through specific regulations. For example, at the Ober Gatlinburg bear exhibit, bears are forced to live in concrete pits with virtually no enrichment other than some tree limbs and a small, stagnant moat. Similarly, the bear kept for six years in a barren, 12' x 22' concrete and chain link cage at Jambbas Ranch was provided with no other enrichment aside from an old bowling ball and a couple of rotting branches. The bear at Maple Lane Wildlife Park is in a similar, sensory deprived concrete and chicken wire enclosure that is devoid of enrichment. (*See, infra.)* Whereas in the wild, bears spend up to 75% of their time foraging (Garshelis *et al.* 1980), the bear at Jambbas Ranch spent 75% of his time exhibiting numerous aberrant, stress and boredom-induced

behaviors including repetitive pacing and cage-biting. (Bacon, 2011.) Video of the bear named Ricky housed at Jim Mack's Ice Cream shows her engaged in abnormal pacing behavior.

4. Lack of visual barriers

The barren surroundings found at many roadside zoos and similar facilities also fail to provide opportunities for bears to express another basic behavior: removing oneself from other bears or from the gaze of the public, and keeping an appropriate distance from cage-mates when warranted by the bears' instinctive social norms (sometimes referred to as "fight or flight distance"). (Laidlaw *et al.* 2010).

When bears are unable to retreat behind visual barriers, they have no means of avoiding one another and cannot escape from the sight of humans and other bears. Instead of being able to engage in their normal social nature and norms, bears may thus be put into unnatural situations in which they are forced to compete for limited resources such as shade, dry areas, or preferred feeding areas. (Laidlaw *et al.* 2010). For example, at least five bears share the small enclosure at the Three Bears Gift Shop in Pigeon Forge, TN. The exhibit housing the bears consists of a sunken concrete pit, a water feature, and fake rock structures. Recent video footage of these bears, who have no opportunity to seek privacy from the viewing public or from each other, shows them engaging in aggressive conflicts characterized by growling, snarling, snapping, swatting, and chasing. (Ex. 13)

Furthermore, in a pit-style enclosure bears are at a psychological disadvantage because human visitors—who they may perceive as predators—are staring down at them, causing them to feel trapped and vulnerable. (Laidlaw *et al.* 2010; L. Kolter et al.). Being

thus exposed creates a constant, never-ending stressor for the captive bears. Bears exhibited in sunken pits at the Three Bears Gift Shop, Cherokee Bear Zoo, and Chief Saunooke Bear Park face the additional stress of having visitors throw food at them, often clearly aiming to hit them.

The View Down into a Bear Pit at Chief Saunooke Bear Park in Cherokee, NC

5. Inappropriate flooring

In addition to the psychological harm bears suffer when forced to live exclusively on barren concrete floors (discussed *supra*), living on unnatural, hard surfaces also takes its toll on the bears' physical health. Nothing in nature prepares a bear for spending his or her life on hard concrete.

Concrete is uniform, abrasive, and unyielding, which can damage a bear's skeletal system as well as cause muscle strain, circulatory compromise, footpad lesions, callus formation, and pressure sores. In addition to being a source of chronic pain, sore feet further inhibit mobility in bears that already do not get sufficient exercise. Decreased mobility contributes to obesity, which leads to increased weight supported by the feet, which in turn worsens pre-existing foot problems. (Laidlaw *et al.* 2010).

The footpad of the declawed bear housed for nearly six years at Jambbas Ranch in Fayetteville, NC has been worn down to the pink in various spots from years living on an unyielding concrete surface.

Obese Asiatic black bears at Chief Saunooke Bear Park in Cherokee, NC

In cases in which calluses have not had time to develop or animals demonstrate stereotypic behaviors such as pacing on concrete floors, footpads are subject to thinning and the formation of blisters and ulcers. Exposed soft tissue and unprotected nerve endings can result in secondary infection or extremely painful sores that heal poorly or re-flare because of constant weight-bearing. (Laidlaw *et al.* 2010). In addition, excessive pressure on limbs and tissue caused by the unyielding concrete floor leads to bruising, discomfort, and circulatory compromise. A bear would normally construct a day bed or den by digging into dirt. Naturally, therefore, a bear's tissue suffers excessive pressure when the animal is forced to rest his or her considerable mass on rock-hard surfaces. (Laidlaw *et al.* 2010).

Apparent forepaw lesions on a black bear at Chief Saunooke Bear Park (l) and a grizzly bear at Cherokee Bear Zoo (r)

Cracks in the rear footpad of a grizzly bear at Cherokee Bear Zoo (l) and a normal footpad (r)

Bears who are kept exclusively on concrete and other unyielding surfaces and are unable to engage in regular exercise as they would in the wild, are also at greater risk of developing arthritis and skeletal disease. (Kitchener *et al.* 2000; Laidlaw *et al.* 2010). Micro-traumas that occur over time, associated with repetitive movements, overuse, and/or overloading of the musculoskeletal system, put captive bears kept in such conditions at high risk for progressive cartilage loss, inflammation, and bony changes in their neck, spine, and joints. The chronic pain associated with osteoarthritis further limits mobility in these already exercise-deprived bears, which leads to more debilitating weight gain. The bears housed at Chief Saunooke Bear Park, Santa's Land, and Cherokee Bear Zoo in Cherokee, North Carolina; Jambbas Ranch in Fayetteville, North Carolina; Black Forest Bear Park in Georgia; the Ober Gatlinburg Bear Exhibit in Gatlinburg, Tennessee; and the Three Bears Gift Shop in Pigeon Forge, Tennessee are forced to live on concrete—which is frequently saturated with moisture—and are totally deprived of access to natural substrates.

6. Inadequate or no opportunities for denning

Captive bears, whether or not they are given the opportunity to dig or locate dens, go through seasonal biochemical changes. All species seek or excavate dens to hibernate for varying periods of time—from days to months—to accommodate metabolic changes that occur based on climate changes and species needs. Brown bears, Asian black bears, and American black bears den up during the winter. Andean bears, sun bears, sloth bears, and panda bears experience down time during rainy weather.

Bears at roadside zoos and similar facilities are often denied the opportunity to excavate dens or hibernate. For example, the Cherokee Bear Zoo is open year-round, and staffers claim that the bears they exhibit "do not need to den up throughout the winter," despite the fact that wild black bears in the Smoky Mountains den up, wild brown bears living in warmer climates such as Spain and the Gobi desert den up, and the same species of captive bears located at Chief Saunooke Bear Park—less than five miles from Cherokee Bear Zoo—choose to den up. (Laidlaw *et al.* 2010).

The American black bear can hibernate from several weeks up to 7 months depending on a complexity of biological factors including photoperiod, food availability, temperature, gravidity, sex, and age. During this time they do not eat, drink, urinate, or defecate. They suppress their basal metabolic rate down to 25% of their non-hibernating rate, while at the same maintaining a body temperature of 30º-36°C in multiday cycles (Tøien *et al.* 2011). It is yet unknown how bears disengage their body temperature from their metabolic cycle. Upon waking, these bears can walk about for up to 3 weeks before their metabolic rate again increases, giving them a survival edge in a yet un-nourishing spring environment. Each bear responds personally to the next denning period and is

innately programmed to consume the calories required to get him through the next winter. In the wild, researchers and behaviorists have observed bears to walk off of feeding grounds to den up for the winter while there are still berries to be had, thus food availability is not the sole factor predicting hibernatory need.

The hibernation process in bears is a highly complex process driven by innate programming that is not simply turned off by the presence of food in a captive environment (Poulsen, E. Pers. Comm. 2011). In captivity, it must be accommodated with behavior-based husbandry to ensure the mental and physical well being of the bear. (http://biologylabs.utah.edu/dearing/Fall%202010/Teaching/Goller_7964/toienetal2011.pdf). Bears who would den up and hibernate for the winter in the wild but are denied the opportunity to do so in captivity will suffer from biochemical disruption and stress as a result. If they are not given the opportunity to den, they act in a manner similar to humans suffering from sleep deprivation: they can become short-tempered, confused, and slower in their responses to their environment. (Laidlaw *et al.* 2010, Poulsen, E. Per. Comm. 2011).

Black Bears Kept in a the Concrete Pit at the Cherokee Bear Zoo in Cherokee, NC, Deprived ofInstinctive Denning Opportunities

7. Inappropriate diets and feeding routines

It is well established in the scientific literature that a primary challenge in housing captive animals is the development of appropriate diets and feeding routines that fulfill the physiological as well as psychological needs of the animals. Feeding protocols should not only be nutritionally balanced but challenge the captive animals to forage in a manner akin to their wild counterparts. (McGowan *et al.* 2010). Many roadside zoos and similar facilities fail to meet even the most basic requirements by simplistically feeding bears highly processed pellets in a single-piled feeding once a day.

Inappropriate feeding programs commonly seen at roadside zoos further harm the bears' physical and psychological well-being. Improper feeding regimens have also been

linked to painful dental diseases that are far less likely to occur in the wild, where bears tend to chew on a variety of "challenging" foods that keep their teeth and gums healthy. (Wenker *et al.* 1999). Due to a lack of education and knowledge on the part of the handlers, bears are often fed a diet that is inappropriate for them.

For example, at the Cherokee facilities, no consideration is given to the diversity of food that bears consume in the wild or to their complex foraging and food-acquisition activities. The main food item for the bears at these facilities is commercially prepared dog chow, fed to them at the same time each day, supplemented by whatever visitors feed them, which is predominantly dog chow, white bread, apples, and iceberg lettuce. (Laidlaw *et al.* 2010). Similarly, the bear housed at Jambbas Ranch for six years was fed a diet of commercial dog chow supplemented with white bread fed by visitors. Presumably, these foods are used because they are the cheapest to purchase, but they provide little nutritive value to the bears.

Ben, the Bear housed at Jambbas Ranch in Fayetteville, NC fromSeptember 16, 2006-August 9, 2012, Eating Single Pile Daily Feeding of Dry Dog Food

Feeding adult bears commercially prepared dog food, as is customary at some facilities, can be harmful because it is too high in protein and excessively fattening, and may contribute to the high incidence of cancer deaths in captive bears. (Laidlaw *et al.* 2010). In addition to being nutritionally inappropriate, a diet of dog chow does not meet the bears' need for sensory stimulation compared to the variety of food types consumed by bears in the wild.

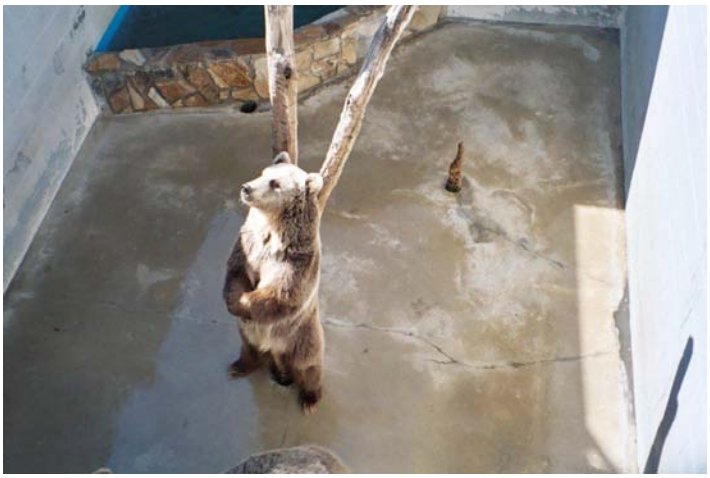
Furthermore, as mentioned previously, foraging is one of the most prominent and time-consuming behaviors of bears in the wild. Indeed, due to their large energy needs and seasonally variable food sources, bears present "an extreme example of an animal being 'hard-wired' to forage." (Carlstead and Seidensticker 1991). Yet, compared to bears in the wild who spend the majority of their time foraging, bears in captivity typically are handed their food at a predictable time one to three times daily, with mealtimes lasting no more than 5-10 minutes. (Carlstead and Seidensticker 1991; Vickery and Mason 2004). This strongly alters the bear's natural "time budget" and prevents the bear from engaging in sufficient amounts of normal foraging behavior. (Carlstead *et al.* 1991; Anderson *et al.* 2010).

Such predictable and monotonous feeding routines, along with offering food that requires no preparation by the bears, lack of variety of foods and use of alternate "starve" periods further contribute to the high incidence and severity of stereotypic behaviors in bears. (Carlstead *et al.* 1991).

Another antiquated practice that requires regulatory intervention is that of public feedings, which involves visitors throwing food at the bears. When visitors are present,

bears accustomed to public feedings will typically engage in begging behaviors by standing on their hind legs, waving their paws, spinning, rolling on their backs, and/or snapping their mouths. (Laidlaw *et al.* 2010). As demonstrated at the Cherokee facilities, employees do not properly monitor food consumed during uncontrolled public feedings, which further compromises the bears' health in a number of ways, including by failing to ensure that the food is of sufficient nutritive value and by introducing bacteria and germs into the bears' diets. (Laidlaw *et al.* 2010).

Begging Behavior Exhibited by the Bear formerly housed at Jambbas Ranch in Fayetteville, NC While Being Fed by a Visiting Child.



Begging Behavior Exhibited By Bear at Cherokee Bear Zoo in Cherokee, NC

More Begging Behavior Exhibited By Bear at the Cherokee Bear Zoo

Bears Kept Exhibiting Begging Behavior at the Ober Gatlinburg Exhibit in Gatlinburg, TN (License No. 63-C-0021)

Visitors at Santa's Land in Cherokee, NC Can Purchase Dog Food from a Gumball Dispenser and Send it Down a PVC Pipe Onto the Same Concrete Floor Where the Bears Urinate and Defecate

A related problem is posed by the fact that bears may favor the easy-to-chew foods thrown by visitors over foods that are more "challenging" and have a "self-cleaning" effect on their teeth, with the resultant increased risk of plaque formation developing painful pathologies of teeth and gums. (Wenker *et al.* 1999). As mentioned previously, the risk of developing painful dental pathologies, including exposed pulp and

lesions, is further increased by captive bears who habitually grip or bite the vertical bars of their cages with their teeth, which causes pulp exposure and the abrasion of the canine teeth of the bears' upper and lower jaws. (Wenker *et al.* 1999; Wenker *et al*. 1998). Poor dental care may also lead to chronic pain, tartar, gingivitis, apical abscessation (toothroot abscess), osteomyelitis (infection of the bones in the face), and bacteriaemia (entry of bacteria into the bloodstream). Bacterial infections may precipitate additional serious and painful conditions including endocardidis (inflammation of heart valves), glomerulinephritis (kidney disease), and uveitis (painful ocular infection). (E-mail from E. Poulsen to Carney Anne Chester, PETA Foundation, June 21, 2012) (Exhibit 14).

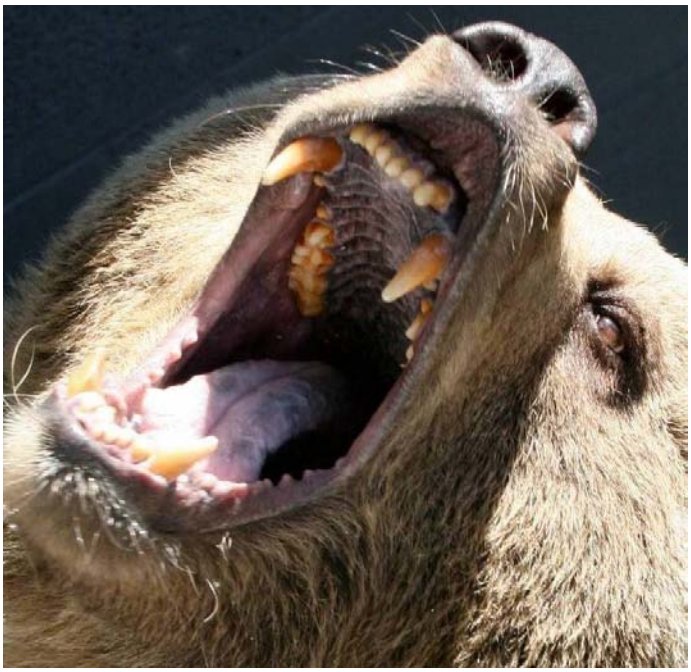
v 

A Bear Caged at Santa's Land in Cherokee, NC Bites at theChain Link Fence Enclosure

The bear housed at Jambbas Ranch in Fayetteville, NC exhibited frequent cage-biting behavior.

A grizzly bear at Chief Saunooke Bear Park had lost both lower canine teeth (notice how the lower lip folds in over the remaining lower teeth in the photo to the right). It appears

that the bear may have an abscess in the cavity where the lower-left canine tooth used to be. There seems to be unhealthy yellowish tissue in that location instead of normal-looking gum tissue.



This grizzly bear at the Cherokee Bear Zoo demonstrates the increased level of calculus buildup seen in captive bears on inappropriate diets.

The lower-right canine teeth of grizzly bears at the Cherokee Bear Zoo have been worn or fractured down to the pulp cavity. The black areas inside the tooth are pulp cavity and dentin.

VI. Improving Bear Welfare Through Appropriate Environments and Husbandry Practices

Although AZA-accredited facilities have taken proactive steps to provide for the unique nature and needs of bears, "[t]he history of bears in captivity has been long and often unsympathetic. If these species are to be maintained properly in the future, we must be fully cognizant of their husbandry requirements and adopt a more responsive and holistic approach to their care." (Law and Reid 2010; Shepherdson 2003). As we have shown, it is not sufficient to leave the adoption of such an approach to the discretion of individual unaccredited captive facilities or generic regulations. Rather, specific regulations must set forth the requirements that are essential for the wellbeing of captive bears. This section discusses those requirements and the science-based approaches, including habitat modifications, sensory enrichment, and husbandry practices, that have

been shown to improve the welfare of captive bears and to ameliorate the physical and psychological stressors associated with captivity.

It is beyond the scope of this petition to provide a comprehensive reference guide for creating species-appropriate environments, enrichment and feeding regiments for bears. This section is merely intended to provide an overview of some of the minimal criteria that must be established to ensure that the behavioral, social and psychological requirements of bears are met in enclosure design and husbandry.

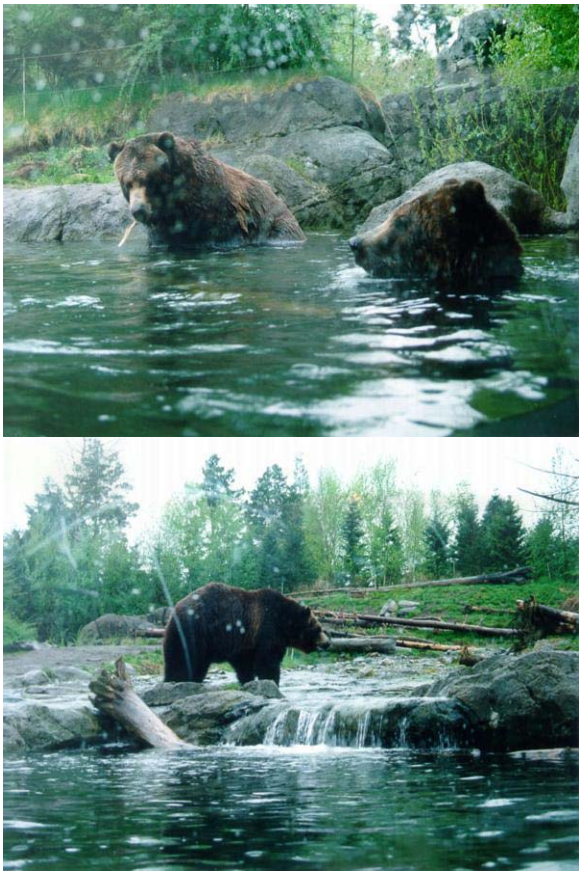
A. Space Requirements

It is by now well-established that bears require large, environmentally complex, natural spaces that allow them to express a wide range of normal movements and behaviors, including normal wild food-gathering behaviors. (Clubb and Mason, 2003; Fischbacher and Schmid 1999; *see also supra* Section V.B.). To meet bears' specific spatial needs, their enclosures must therefore be large enough to allow the bears to engage in normal movement patterns and behaviors. (Clubb and Mason, 2003; Clubb and Mason 2007). They also must provide sufficient space for the bears to feel secure, by allowing them (if necessary) to escape from assault or the threat of assault by other bears. (*See generally* AZA Enrichment Notebook (stating that "[s]uccessful captive management must address the bears' innate motivation for movement or travel")). To meet these requirements, bears should be housed in large, natural, wooded enclosures.

Naturalistic Bear Habitat at the AZA-accredited Woodland Park Zoo in Seattle, WA Provides Bears with SufficientSpace, Enrichment and Opportunities to Engage in Bear-Specific Behaviors

Naturalistic Bear Habitat at the AZA-accredited Northwest Trek Wildlife Park in Tacoma, WA

Additionally, research has shown that bears with access to large or medium pools exhibit "significantly" fewer stereotypic behaviors than other bears. (Montaudouin and Le Pape 2005). It is therefore essential that bears be given an opportunity to wash and clean themselves and to engage in other species-appropriate behavior by having access to an appropriately sized pool (Clubb and Mason 2003; Laidlaw *et al.* 2010; *see generally* AZA Enrichment Notebook).



Bears at the AZA-accredited Woodland Park Zoo
in Seattle, WA Have the Opportunity to Bathe,
Cool Themselves, and Explore a Large, Naturalistic Pond

Bears like the bear formerly housed at Jambbas Ranch who was provided with only one small water source for bathing and for drinking are not only forced to ingest unsanitary water, but are deprived of the instinct to fully wash and clean themselves. Minimum bear husbandry practices require captive bears to be provided with a pool of *swimmable size* since many species of bears—including brown bears and black bears—have a genetic expectation to bathe, swim, and catch fish in their native habitats.

The bear housed at Jambbas Ranch for six years had one small metal water receptacle for bathing and drinking (l); the water receptacle was covered in algae and the water was brown, opaque, and putrid (r).

B. Sensory Stimulation and Enrichment

Given the dimensions of bears' natural habitats, it is important for captive facilities to provide "qualitative, functional characteristics, which are essential components of a bear habitat." (L. Kolter et al.). In the wild, a "functional" bear home range consists of a system of feeding places, resting places and vantage points, and pathways. Facilities should include all of these functional areas for each individual bear. (L. Kolter et al.).

Ben, the bear formerly confined in a 12' by 22' concrete and chain link cage at Jambbas Ranch was transferred to a vast 2-acre natural habitat at the Performing Animal Welfare Society (PAWS) in San Andreas, California (license no. 93-C-0074) pursuant to a court order. Ben's new habitat has oak trees, California brown grass, green grass, hills, and a large pool. Despite living in grossly inadequate and inhumane conditions for most of his life, Ben has not exhibited any stereotypic behavior since being introduced to his new habitat at PAWS on August 10, 2012. PAWS is accredited by the Global Federation of Animal Sanctuaries.

Bears are curious, energetic, and highly manipulative by nature, devoting a large part of their day to searching for food and nesting materials. Environmental enrichment is therefore an essential requirement of basic, daily bear husbandry. (Shepherdson 2003). The goals of enrichment are manifold and include: increasing environmental novelty, change and complexity; providing bears with meaningful and diverse interactions with their surroundings; mediating social interactions; providing bears with cognitive stimulation and problem solving challenges; and otherwise meeting the species-specific behavioral needs of bears such as foraging, digging and denning. (Shepherdson 2003). The purpose of enrichment is to help create a complex and suitable living environment

that stimulates the bears' senses and allows the bears to engage in genetically driven behaviors.

Concrete Bear Pit at the Black Forest Bear Park,
Completely Devoid of Enrichment

Research has shown that changes in housing designs and providing enrichments that take into account the bears' ranging tendencies (*e.g*. by providing more space to utilize, and providing for behavioral needs through, multiple den sites, greater day-to-day environmental variability and novelty, and more control over exposure to aversive or rewarding stimuli) can be particularly effective means to reduce abnormal behavior patterns and improve wellbeing. (Ross 2006; *see also generally* AZA Enrichment Notebook, stating that "[p]romoting normal wild behavior through the provision of suitable species-specific enrichment can lead to improved mental and physical health"). "Although the type of enrichment may differ, it must be stressed that all bear areas should contain sufficient enrichment choices [such as] shelter, sun, shade, heated rocks, cooled areas or water features" that allow the bears to regulate their own activity levels, temperature and visibility to the public. (AZA Enrichment Notebook).

Among other things, hiding food in a way that encourages natural foraging behavior has been shown to substantially reduce stereotypic behavior in captive bears. To avoid physical and mental starvation and the concomitant aberrant stress behaviors such as pacing—bears should be provided with enrichment objects full of foods, so that the bear can perform investigative appetitive behavior. (*See also infra* at Section VI.B.).

A bear tears apart a hollowed-out pumpkin containing honey and fruit at the AZA-accredited Houston Zoo.

A bear enjoys a Halloween-themed frozen treat at the AZA-accredited Oakland Zoo.

Similarly, research has demonstrated that providing nesting material in both indoor and outdoor areas, in the form of straw, wood-chippings, branches, or leaves can stimulate natural digging and play-behavior and decrease abnormal behavior. Providing these substrates is particularly important in enclosures that are not primarily covered with natural ground cover. (Meyerson 2007; L. Kolter et al.).

Bears should also be given a choice of sites in which to make day beds, trees and other structures for climbing, and dens for adults and cubs. In addition, bears should have access to substantial amounts of nest-building materials such as grasses, leaves, soft

branches, straw, hay, and wood wool, all in substantial amounts to significantly cushion and insulate the bears. (Laidlaw *et al.* 2010).

Bear Enclosure at Jambbas Ranch in Fayetteville, NC,
Devoid of Denning or Nesting Materials

Naturalistic Bear Habitat at the
AZA-Accredited Woodland Park Zoo in Seattle, WA

C. Privacy and Security

Bears in captivity must have adequate space and visual barriers to allow them to escape competition and confrontation and be able to find privacy. Structural enhancements, furnishings, and other forms of enrichment discussed previously are not only essential for sensory stimulation but serve the added function of providing privacy

from humans and cage-mates. Built-in visual barriers such as rock structures, uneven terrain, trees, logs and brush piles can provide a much-needed retreat for the animals. (AZA Enrichment Notebook; Laidlaw *et al.* 2010; Gupta 2007).

Bears at the Chief Saunooke Bear Park Exhibited in a Barren, Concrete Pit Without Enrichment, Adequate Space, or Visual Barriers

Solitary bear exhibited at Maple Lane Wildlife Park, Without Enrichment, Adequate Space, or Visual Barriers

Additionally, bears should always be positioned at or above the eye level of the visitors who observe them so that they do not feel threatened. (Law and Reid 2010).

D. Diet and Feeding Routines

Since bears are genetically predisposed to spend most of their time foraging for food, a considerable portion of a bear's daily time budget should be devoted to food acquisition, especially during the fall when many bears must accumulate substantive fat reserves. (Carlstead and Seidensticker 1991; Garshelis and Pelton 1980).

Serving bears one or two large single-piled feedings daily—as is common practice at roadside zoos—is inappropriate. Bears are "designed to locate and procure food from a multitude of different sources using a range of different techniques and, as such, are an extraordinary challenge to even the most gifted enrichment protagonist." (Law and Reid 2010). As scientists have explained, feeding captive bears is not simply a matter of filling their stomachs: bears who spend most of their days in the wild gleaning small fruits or leaves "are not adapted to a single substantial meal. They are probably interested in food and foraging for the pleasure it brings." (Montaudouin and Le Pape 2005). "Bears are designed to forage for long periods of time to survive and thrive so if this option is ostensibly removed they are left purposeless and unchallenged." (Law and Reid 2010). Thus, in a recent study (McGowan 2010), it was observed that captive grizzly bears who were given food hidden in cardboard boxes or blocks of ice "did not always immediately consume the extracted food [thus suggesting] that consumption is not an exclusive motivating factor, or the sole benefit, of manipulating concealed food resources."

A bear climbs a tree to find peanut butter paste smeared on the upper branches in the naturalistic habitat at the AZA-accredited Honolulu Zoo.

Bear-specific husbandry therefore requires that foods be presented in enrichment-style feedings throughout the day to encourage normal bear foraging behavior, for example, by scattering small pieces of food around the enclosure or hiding foods in tall grass or objects, to promote curiosity and food-exploration. (Carlstead and Seidensticker 1991; Montaudouin and Le Pape 2005; Gupta 2007; Fischbacher and Schmid 1999; AZA Enrichment Notebook; Laidlaw *et al.* 2010).

Bears must be provided a diet that not only offers behavioral stimulation but also meets their nutritional needs. For example, Asiatic black bears, brown bears, panda bears, sloth bears, spectacled bears and American black bears are highly vegetarian and in captivity should be provided with a largely vegetarian diet made up of foods that are seasonally available in their natural habitats. To improve the physical well-being of bears, the amount and type of food bears should be adjusted from season to season, e.g.

high fat foods should be provided in the fall as bears eat to gain fat in preparation for winter dormancy. (Carlstead and Seidensticker 1991; Garshelis and Pelton 1980; Law and Reid 2010; Sreekumar and Balakrishnan 2002; Huygens *et al.* 2003; Peyton 1980; Hwang and Garshelis 2007; Reid *et al.* 1989; Hashimoto 2002).

The diet must also take into consideration each individual bear's nutritional needs, which are dictated by a variety of factors, such as specie, age, sex, energy expenditure, season, pregnancy, etc.

Members of the visiting public are encouraged to feed Little Rikki the bear without supervision at Jim Mack's Ice Cream by delivering the food through a PVC chute, risking the transmission of zoonotic disease.

E. Denning

Bear species, including sun bears, brown bears, American black bears and Asiatic black bears, that den up for the winter in the wild must be given an opportunity to do so in captivity, to avoid becoming physiologically and psychologically challenged. Quiet, dark, cool private winter denning sites should be available, either by giving the bears the ability to dig dens in the enclosure or giving them access to indoor winter denning bedrooms. (Laidlaw *et al.* 2010; Hwang and Garshelis 2007; Koike and Hazumi 2008).

Bears must also be provided with enough fresh bedding material to make up their winter nests. On average, 1.5 bales of straw per bear is suitable for winter denning. (Laidlaw *et al.* 2010).

The concrete "den" at Jambbas Ranch is not only devoid of nesting materials, but is saturated with water to the point that algae is flourishing.

Another view of the concrete "den" at Jambbas Ranch.

VII. Bears are Not Being Protected from Unlawful Cruelty Under Current Standards

Under the current regulatory framework in subpart F, the USDA allows bears to be housed in conditions that violate state cruelty-to-animals laws, which is a clear indication that the current regulations are woefully inadequate to fulfill the stated purpose of the Animal Welfare Act. Jambbas Ranch Tours, Inc., and its owners and corporate officers have been found to have violated Chapter 19A of the North Carolina General Statutes, which prohibits animal cruelty or the "cruel treatment" of any animal. *See* N.C. Gen. Stat. § 19A-1. "Cruel treatment" is defined to include "every act, omission, or neglect whereby unjustifiable physical pain, suffering, or death is caused or permitted." *Id.* The primary basis for the court's findings have been related to Ben's inhumane confinement in a tiny, barren cage that USDA inspectors approved of.

For six years, Jambbas Ranch forced Ben to live in a tiny concrete and chain link cage, devoid of enrichment, and deprived Ben of the opportunity to engage in any normal bear behavior. Two concerned residents brought a lawsuit against Jambbas Ranch in January 2012, alleging that Jambbas subjected Ben to unlawful suffering and physical pain. Two internationally renowned bear experts traveled to Jambbas to observe Ben and found that Ben was suffering at Jambbas, as demonstrated in part by his exhibition of numerous aberrant stereotypic behaviors—including incessant pacing and cage-biting—for at least 75% of his waking hours. (Bacon 2011; *see also,* Preliminary Injunction, *Ray and Harrison v. Jambbas Ranch Tours, Inc. et al*. Aug. 6, 2012 (Exhibit 15)). Ben also showed signs of physical pain, including inflammation where one of his claws had been removed and numerous places on his footpads that have been worn down to the pink from years living and pacing on unyielding hard and often wet concrete. *See* Exhibit 15;

see also, *supra* p. 31. By Jambbas' own admission, Jambbas never provided Ben with veterinary care or treatment, forced Ben to bathe in and drink from the same brown, putrid water contained in an algae-infested metal trough, forced Ben to subsist primarily on a daily single pile feeding of dry dog kibble dumped on the same floor where Ben urinated and defecated, and subjected Ben to near total sensory deprivation in conditions that the court's final order described as "the functional equivalent to forcing a human to live in a small closet." *See* Permanent Injunction, *Ray and Harrison v. Jambbas Ranch Tours et al.*, Aug. 27, 2012 (Exhibit 16); *see also*, Preliminary Injunction (Exhibit 15).

During an August 1, 2012, court hearing, North Carolina District Court Judge Kimbrell Tucker found that by forcing Ben to live in what the judge described as a 12' by 22' foot "concrete chain link fence dog run," Jambbas subjected Ben to unlawful and unjustifiable physical pain and suffering, and ordered Ben's immediate transfer to a reputable sanctuary. *See* Preliminary Injunction (Exhibit 15). The judge found "a substantial and immediate risk" that unless Ben was immediately removed from Jambbas Ranch, Ben would "continue to suffer physically" and that he would "continue to exhibit abnormal stereotypic behaviors including pacing." *Id.* The judge further found that immediate transfer of Ben to the sanctuary was necessary in order to prevent Jambbas Ranch from subjecting Ben to further physical pain and suffering by continuing to deny Ben adequate space, enrichment, natural substrate, veterinary care, naturalistic habitat, sanitary conditions, and opportunities to engage in any normal bear behavior. *Id.*

The judge based her findings that the Ben was suffering primarily upon the fact that Ben's most basic needs were not being met in the 12' by 22' cage, which the judge described in open court as a "concrete and chain link fence dog run." The judge

specifically found that irrespective of whether the cage size met USDA guidelines established by subpart F, the enclosure was insufficient to ensure Ben's health and wellbeing or to prevent Ben from unjustifiable suffering and physical pain. *See id.* The court found that Ben's owners committed unlawful animal cruelty by causing him unjustifiable physical pain and suffering by:

- Failing to provide Ben with adequate space;
- Failing to provide Ben with adequate enrichment;
- Failing to provide Ben with a natural substrate;
- Failing to provide Ben with a naturalistic habitat;
- Forcing Ben to live in unsanitary conditions; and
- Depriving Ben of the opportunities to engage in bear-specific behaviors, including foraging, exploring, digging, running, climbing, denning, hibernating, and swimming.

See Permanent Injunction (Exhibit 16), Preliminary Injunction (Exhibit 15).

On August 27, 2012, the judge entered a final order, permanently terminating Jambbas' possessory and ownership interests in Ben and transferring permanent ownership of Ben to the Performing Animal Welfare Society (PAWS) sanctuary where he has been housed since August 10, 2012. *See* Permanent Injunction (Exhibit 16). The final order also permanently prohibits Jambbas Ranch from acquiring any new bears *or from housing any captive wild animals in the 12' by 22' concrete chain link cage* where Ben was formerly confined at Jambbas Ranch, which, as the order describes is "unsuitable for use as a primary enclosure for any animal." *Id.* By its *own admission*, Jambbas Ranch violated North Carolina cruelty to animals laws by "causing Ben the bear unjustifiable physical and psychological suffering and physical pain." *Id.*

The foregoing judicial findings underscore the extent to which the USDA is failing to ensure the "humane care and treatment" of bears by USDA licensees in accordance with 7 U.S.C. § 2131(1).

VIII. Specific Request for Agency Action

Based on the foregoing, Petitioners request that APHIS immediately initiate rulemaking proceedings to promulgate the following regulations to be added to subpart F to ensure the humane handling, care, and treatment of captive bears (excluding polar bears, who are already specifically regulated in subpart E) as specified below. Furthermore, Petitioners request that APHIS hire a full-time specialist with knowledge, background, and experience in the proper husbandry and care of bears to oversee the proper implementation and enforcement of these regulations. Petitioners propose that subpart F be amended as follows:

Subpart F. Specifications for the Humane Handling, Care, Treatment, and Transportation of Warmblooded Animals Other Than Dogs, Cats, Rabbits, Hamsters, Guinea Pigs, Nonhuman Primates, and Marine Mammals

§ 3.145 Additional Specifications for Bears

In addition to the specifications in this Subpart, licensees must comply with the following requirements for all species of bears except polar bears.

- ***(a) Primary enclosures must have a substrate other than bare concrete (e.g., soil, absorbent bedding, or grass). Pit-style enclosures (e.g., four solid walls that are 5 feet or more in height) are prohibited.***
- ***(b) Each bear that is housed in any primary enclosure must be provided minimum space as follows:***
  - ***a. Enclosures containing one or two bears 250 lbs. (113.40 kgs.) and larger shall have an area at least 5,381.95 ft^2 [500 m^2]. The size of the enclosure must increase by an additional 1,614.59 ft^2 [150 m^2] for each additional bear in the facility. The dimension of the smallest side must measure at least 65.62 ft [20 m]. The height must be at least 20 ft. [6.1 m] tall to accommodate nest baskets or hammocks, and climbing structures. In the case of two different sized bears being housed together, the enclosure must measure in accordance with the size of the largest bear.***
  - ***b. Enclosures containing one or two bears 249 lbs. (112.94 kgs.) and smaller shall have an area at least 4,843.76 ft^2 [450 m^2]. The size of the enclosure must increase by an additional 1399.31 ft^2 [130 m^2] for each additional bear in the facility. The dimension of the smallest side must measure at least 49.05 ft [18 m]. The height***

must be at least 18 ft [5.49 m] tall to accommodate nest baskets or hammocks, and climbing structures.

(c) Primary enclosures for bears must include a den and a pool to allow bears to express species-typical behaviors.

a. The den must not be made of metal; the den shall be twice the length of the bear and tall enough only for the bear to stand up; the den must be large enough to accommodate mothers and their young or bears who choose to den up together; the viewing public must not be visible from the inside of the den; females of breeding age must be provided their own den.

b. The pool must satisfy the following requirements:

(1) Pools for bears 250 lbs. (113.40 kgs) and larger shall have a mean horizontal diameter (MHD) of at least 8.0 ft (2.44m.) and a surface area of at least 96.0 sq. ft. (8.93sq. m.) for two adult bears. The pool should be at least 5 ft. (1.52 m.) deep. These dimensions do not include entry and exit areas. For each additional bear, the surface area should be increased by 40 sq. ft. (3.72 sq. m.), all of which should be at least 5 ft. (1.52 m.) deep.

(2) For bears 249 lbs. (112.94 kgs) and smaller, the pool should have a MHD of at least 7 ft. (2.13 m.) and a surface area of at least 77.40 sq. ft. (7.19 sq. m.) for two adult bears. The pool should be at least 4 ft. (1.22 m.) deep, both dimensions excluding entry and exit areas. For each additional animal, the surface area of the pool should be increased by 30 sq. ft (2.7 sq. m.) all of which should be at least 4 ft. (1.22 m.) deep.

(3) Pools shall not contain water that would be detrimental to bear health. Water quality shall be maintained by filtration, chemical treatment, or other means. The wall and bottom surfaces of the primary enclosure pools of water must be cleaned as often as necessary to maintain proper water quality. Pools must have at least one point of entry that is sloped or provides steps that are large enough for the bears to sit immersed in the water.

(d) Environmental enhancement. Environmental enhancement for required for all primary enclosures housing bears. Dealers, exhibitors, and research facilities must adhere to minimum standards of environmental enhancement necessary to promote the psychological well-being of bears. Environmental enhancement for captive bears must offer novel olfactory, visual, auditory, and tactile stimuli at regular intervals throughout the week, and must be incorporated into the primary enclosure as well as any off-exhibit areas, irrespective of whether the primary enclosure and off-exhibit areas are indoor or outdoor. When the novelty of an enrichment item or environmental enhancement activity wears off, it must be revised or replaced. Minimum standards of enrichment and environmental enhancement for captive bears must offer opportunities for all of the following bear-specific behaviors:

a. Climbing. Bears must be provided with the opportunity to climb regularly.

b. Digging. Bears must be provided with the opportunity to dig for novel items on a daily basis.

c. Nest building. Bears must be provided with fresh bedding, such as straw, to allow the bear to express normal daily nest building activity.

d. Other sensory stimulation. Bears must be provided with materials to encourage the bears to explore, investigate, and use their olfactory, auditory, and visual senses.

e. Hibernating. Bears in northern climates and pregnant females in all regions must be afforded an opportunity to hibernate in their dens. Denning conditions must include but are not limited to: nesting material, quiet, darkness, species-appropriate temperature and humidity, and basic food and water presented in single piled feeding outside the nest box accessible to the bear, in accordance with currently accepted professional standards as cited in appropriate professional journals or reference guides.

(e) Feeding. Bears should be fed at least twice daily by the licensee or the licensee's qualified employee, once in the morning as early as practicable, and once at noon and/or evening unless the bears are hibernating, and except as otherwise required to provide adequate veterinary care. If dominant individuals are fed together with other bears, multiple feeding sites must be provided. Multiple feeding sites must always be presented – a minimum of one site per animal. The animals must be observed to determine that all receive a sufficient quantity of food. For all bears other than infant and juvenile bears, all feedings must be presented in enrichment style feedings such as scatter feeds, or in puzzle feeders. Bear feeding records noting the individual daily consumption must be maintained at the facility for 1 year and must be made available for APHIS inspection. The feeding records should reflect an accurate account of food intake. Bears must be provided with the opportunity to forage for food times 1-2 times daily. Public feedings are prohibited.

(f) Exhibition of Bears. Unless orphaned, bears should not be exhibited until brought out of the den by the female, and should never be removed from the female for exhibition purposes. Exhibition alone should only occur after the period of natural dispersion when the female has expelled the cub from her care.

(g) No bear shall be delivered by any person to any carrier or intermediate handler for transportation, in commerce, or shall be transported in commerce by any person unless such bear is weaned and is at least 18 months old.

(h) Adequately-trained employees. A sufficient number of adequately trained employees shall be utilized to maintain the professionally acceptable level of bear-specific husbandry practices set forth in this subpart. Such practices shall be under a supervisor who has a background in bear husbandry. Any training of bears must be under the direct supervision of

experienced trainers or handlers who meet professionally recognized standards for handling and training.

Respectfully submitted by:

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