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Anne Haas

Pace University School of Law, ahaas@law.pace.edu

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COMMENT

Interpreting “Enhancement of Survival” in Granting Section 10 Endangered Species Act Exemptions to Animal Exhibitors

Anne Haas*

I. INTRODUCTION

Since 1973, the Endangered Species Act has sought to protect and revive vulnerable species and the ecosystems on which they depend. With habitat loss ever-increasing and the effects of climate change becoming more pronounced, species preservation is more critical than ever. Zoos, aquariums, and similar facilities house over 1000 threatened and endangered species, making them an increasingly important player in wildlife management.¹ Unfortunately, while some zoos shine as conservation and education centers, circuses and roadside zoos struggle to meet the most basic animal welfare requirements.

In August 2013, People for the Ethical Treatment of Animals (“PETA”) sued the United States Fish & Wildlife Service (“FWS”), claiming the Service was “sleeping on the job” when it issued permits allowing the Hawthorn Corporation to export fifteen endangered tigers into Canada for use in circus performances.²

* Anne Haas is a joint J.D. Candidate at the Pace University School of Law and MEM Candidate at the Yale University School of Forestry and Environmental Studies. Prior to pursuing her J.D., she worked as a marine mammal trainer.

1. *Zoo and Aquarium Statistics*, ASS’N OF ZOOS & AQUARIUMS, <http://www.aza.org/zoo-aquarium-statistics/> (last visited Sept. 10, 2014).

2. Complaint for Declaratory & Injunctive Relief at 1, *PETA v. U.S. Fish & Wildlife Serv.*, No. 13-civ-01209 (RCL), 2014 WL 3686113 (D.D.C. July 18, 2014), 2013 WL 4494652 [hereinafter *Complaint*]; see also Alisa Mullins, *PETA Sues*

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Although the Endangered Species Act (“ESA”) *prohibits the* import and export of endangered species,³ FWS may authorize an otherwise prohibited act where it “enhance[s] the propagation or survival” of the species.⁴ There is considerable debate, however, as to how this phrase should be construed, with environmental and animal rights organizations urging for a narrow reading. This note highlights the importance of a precise and narrow interpretation in the context of circuses, zoos, and other animal exhibitors.

Managing endangered species in captivity presents a unique set of problems. Despite their enormous potential to preserve species in the wild – through captive breeding programs, conservation initiatives, and environmental advocacy – many facilities are lagging behind. Part II of this note discusses the evolution of zoos from ancient Egyptian displays of wealth to modern day conservation and education centers. Focusing on the Endangered Species Act, Part III introduces various laws protecting captive animals. Part IV discusses the great potential of zoos to preserve species and the ecosystems on which they rely, while acknowledging the diverse nature of animal exhibitors and the variety in quality of animal care. In response to this inconsistency, and in the context of *PETA v. U.S. Fish & Wildlife Service*,⁵ Part V recommends four factors that the FWS might use to evaluate an animal exhibitor’s potential to enhance species survival in furtherance of the ESA.

II. THE ADVENT AND EVOLUTION OF ZOOS

Zoos, aquariums, circuses, and similar facilities allow visitors to view and interact with wild animals in a controlled environment. Animal exhibition is nothing new; as early as 1500 B.C., ancient Egyptians displayed exotic animals as a show of

U.S. Fish & Wildlife Service for Sleeping on the Job, THE PETA FILES (Aug. 6, 2013), <http://www.peta.org/blog/peta-sues-us-fish-wildlife-service-sleeping-job/>.

3. Endangered Species Act of 1973, 16 U.S.C. § 1538(a)(1)(A) (2012).

4. *Id.* § 1539(a)(1)(A).

5. See generally Complaint, *supra* note 2; see also *PETA v. U.S. Fish & Wildlife Serv.*, No. 13-civ-01209 (RCL), 2014 WL 3686113 (D.D.C. July 18, 2014).

wealth and status.⁶ The first public zoos were opened in Greece around the fourth century B.C., serving as learning centers for students interested in plant and animal life.⁷ Today, animal exhibitors—in a variety of forms—are commonplace throughout the world. While varying in terms of size, mission, and quality of animal care, zoos continue to evolve in the face of both public and environmental pressures.

Two forces in particular have shaped the evolution of zoos from entertainment venues to conservation and education centers: a growing societal interest in animal welfare and an urgent need to preserve species and ecosystems in the face of climate change, habitat loss, and other anthropogenic environmental threats.⁸ As a result, the public's expectations of zoos have changed considerably with time.

Prior to the twentieth century, animal welfare in zoos was largely ignored.⁹ Beginning in the 1970s, however, zoos began to change, due in large part to a growing public awareness of these issues.¹⁰ While some animal rights organizations, such as People for the Ethical Treatment of Animals (PETA) oppose the existence of zoos altogether,¹¹ others such as the Humane Society of the United States (HSUS) have worked with zoos, encouraging them to act primarily as sanctuaries for wild animals, rather than as profit-seeking attractions.¹² As proof of this public influence at work, many facilities have replaced purely-for-

6. KALI S. GRECH, A DETAILED DISCUSSION OF THE LAWS AFFECTING ZOOS (2004), available at <https://www.animallaw.info/article/detailed-discussion-laws-affecting-zoos>.

7. *Id.*; see also TERRA INCOGNITA, EVOLUTION OF THE ZOO: AN OVERVIEW OF SIGNIFICANT ZOOLOGICAL DEVELOPMENTS SPANNING FROM BIBLICAL TIMES THROUGH TO CONTEMPORARY PROPOSALS 6 (2011).

8. See B. Kohn, *Zoo Animal Welfare*, 13 REV. SCI. TECH. OFF. INT. EPIZ. 233 (1994), available at <http://www.oie.int/doc/ged/D8882.PDF>; see also GRECH, *supra* note 6.

9. GRECH, *supra* note 6.

10. *Id.*

11. *Animal Rights Uncompromised: Zoos*, PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS, <http://www.peta.org/about-peta/why-peta/zoos/> (last visited Sept. 10, 2014).

12. *Zoos: Working to Improve Zoo Conditions and Promote Natural Habitats*, HUMANE SOC'Y OF THE U.S. (Sept. 25, 2009), <http://www.humanesociety.org/issues/zoos/facts/zoos.html>.

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entertainment animal shows with educational public presentations highlighting a species' natural history and behaviors.¹³ A second example of this shift is the relatively recent trend towards creating naturalistic enclosures.¹⁴ In many cases, providing a natural, species-specific environment takes precedence over giving visitors the best possible view.¹⁵

In addition to an increased interest in animal welfare in zoos, the very definition of "animal welfare" has evolved. Historically, "welfare" encompassed only the most basic requirements for life – nutrition, water, sanitation, housing, and veterinary care.¹⁶ Over the past few decades, animal scientists have found that an animal's psychological health is equally essential to its overall physical wellbeing.¹⁷ As a result, modern zoos often consider the following as important components of "animal welfare": mental and physical stimulation through training and environmental enrichment,¹⁸ stress management, and species preservation through captive breeding and education.¹⁹ It is common for a facility to consider all of these factors when, for example, designing a new exhibit or implementing an animal care program.

Changes in zoos' approaches to animal welfare have been accompanied by growing awareness of the importance of species preservation in the wild.²⁰ As such, many facilities are involved in captive breeding and reintroduction programs, conservation

13. Kohn, *supra* note 8, at 237.

14. *Id.*

15. *Id.*

16. *Id.* at 235.

17. *Id.*

18. *Enrichment*, ASS'N OF ZOOS & AQUARIUMS, <http://www.aza.org/enrichment/> (last visited Sept. 11, 2014). According to the Association of Zoos & Aquariums, environmental enrichment is "a dynamic process for enhancing animal environments within the context of the animals' behavioral biology and natural history. Environmental changes are made with the goal of increasing the animal's behavioral choices and drawing out their species-appropriate behaviors, thus enhancing animal welfare." *Id.* Enrichment may come in a variety of forms, including formal training sessions, environmental enrichment devices (EEDs), habitat enrichment, sensory enrichment, and food enrichment. *Id.*

19. Kohn, *supra* note 8, at 235-36.

20. *Id.* at 236.

initiatives benefitting threatened or endangered species, and educational programs. These efforts are discussed in detail in Part III.

While many animal exhibitors are dedicated to providing excellent animal care and wildlife protection, not all zoos are created equal. Circuses and so-called “roadside zoos” have been criticized by animal advocates.²¹ These facilities, designed purely for entertainment and profit purposes, often struggle to meet minimal federal animal care standards.²² In circus shows, animals are asked to perform unnatural, sometimes uncomfortable behaviors.²³ The training methods used are often controversial;²⁴ punishment and food deprivation are used in place of “positive reinforcement.”²⁵ Because circuses are constantly moving, animals are necessarily confined to small, dirty cars for long periods of time.²⁶

These facilities survive because federal animal welfare regulations are lax, at best. Animal care laws often take the form

21. See, e.g., HUMANE SOC’Y OF THE U.S., *supra* note 12; *Circuses: Three Rings of Abuse*, PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS, <http://www.peta.org/issues/animals-in-entertainment/animals-used-entertainment-factsheets/circuses-three-rings-abuse/> (last visited Sept. 11, 2014).

22. See, e.g., Leigh Remizowski, *USDA Fines Ringling Bros. Circus over Treatment of Animals*, CNN (Nov. 30, 2011), <http://www.cnn.com/2011/11/29/us/ringling-bros-fine/>.

23. *Circus: The Problem*, BORN FREE, http://www.bornfreeusa.org/mbw/c1_problem.php (last visited Sept. 11, 2014).

24. See, e.g., *id.*; PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS, *supra* note 21.

25. The American Association of Zookeepers defines positive reinforcement as “[t]he process of following an action or response with something that the subject wants, thereby causing an increase in the frequency of occurrence of that behavior.” *AZA/AAZK Animal Training Terms & Definitions*, AMERICAN ASS’N OF ZOOKEEPERS, INC., ANIMAL BEHAV. MGMT. COMMITTEE, AMERICAN ZOO & AQUARIUM ASS’N BEHAV. ADVISORY GROUP, https://aazk.org/wp-content/uploads/training_terms_glossary.pdf (last visited Sept. 11, 2014); see also KEN RAMIREZ, *ANIMAL TRAINING: SUCCESSFUL ANIMAL MANAGEMENT THROUGH POSITIVE REINFORCEMENT* (Ken Ramirez ed., 1999) (further discussion of positive reinforcement training in zoos and aquariums).

26. See, e.g., BORN FREE, *supra* note 23; *Circuses, Animals in Entertainment*, HUMANE SOC’Y OF THE U.S., http://www.humanesociety.org/issues/circuses_entertainment/ (last visited Sept. 11, 2014); PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS, *supra* note 21.

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of minimum standards, designed to prevent only the most extreme cruelty and regulating only the basic measurements of wellbeing—nutrition, sanitation, and veterinary care.²⁷ In addition, only certain animals are protected, based either on species or conservation status.²⁸ Before discussing an animal exhibitor’s role in preserving endangered species, it is useful to examine the variety of federal laws, state laws, and other programs protecting captive animals.

III. THE ENDANGERED SPECIES ACT AND OTHER LAWS PERTAINING TO ANIMAL EXHIBITORS

A variety of laws and programs protect zoo animals, with varying success. This Part briefly discusses some of these laws and how they affect animal exhibitors. It concludes with an introduction to the Association of Zoos & Aquarium’s highly regarded voluntary accreditation scheme.

A. Endangered Species Act (“ESA”)

1. Purpose and Prohibitions

Signed into law in 1973, the ESA has been called “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.”²⁹ In passing the Act, Congress recognized the importance of preserving nature. Its primary purpose is to “provide a program for the conservation of” endangered and threatened species.³⁰ The Supreme Court has elaborated on the Act’s goal, finding that “[t]he plain intent of Congress in enacting [the ESA] was to halt and reverse the trend toward species extinction, whatever the cost.”³¹

Sections 7 and 9 of the Act describe the ESA’s main prohibitions.³² The former of these sections prevents the federal

27. GRECH, *supra* note 6.

28. *See generally id.*

29. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978).

30. Endangered Species Act of 1973 § 2(b), 16 U.S.C. § 1531(b) (2012).

31. *Tenn. Valley*, 437 U.S. at 184.

32. *See* §§ 1536, 1538 (2012).

government from funding, authorizing, or carrying out any action that may jeopardize the existence of an endangered or threatened species.³³ It also forbids the destruction or adverse modification of designated critical habitat.³⁴ The latter section prohibits the “taking” of an endangered species by government or private parties.³⁵ The Act defines a “take” to include, among other actions, to kill, harass, or harm.³⁶ The Department of the Interior (“DOI”) is responsible for the implementation of the Act with respect to terrestrial species, and it has delegated primary enforcement authority to the United States Fish & Wildlife Service (“FWS”), a sub-agency within the DOI.³⁷

In order to enjoy protection under the ESA, a species must be listed by the Secretary of the Interior as either endangered or threatened.³⁸ According to the Act, an “endangered” species is one “in danger of extinction throughout all or a significant portion of its range.”³⁹ Similarly, a “threatened” species is one “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”⁴⁰

When deciding whether to list a species, FWS must consider five enumerated factors: (1) the present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; or (5) other natural or

33. *Id.* § 1536(a)(2).

34. *Id.*

35. *Id.* § 1538(a)(1)(B).

36. *Id.* § 1532(19).

37. *Endangered Species Act: Overview*, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/endangered/laws-policies/index.html> (last updated July 15, 2013); *see also* Memorandum of Understanding between the U.S. Fish & Wildlife Serv., U.S. Dep’t of the Interior, & the Nat’l Marine Fisheries Serv. Nat’l Oceanic & Atmospheric Admin., U.S. Dep’t of Commerce, *Regarding Jurisdictional Responsibilities & Listing Procedures Under the Endangered Species Act of 1973* (Aug. 1974), *available at* http://nctc.fws.gov/courses/csp/csp3116/resources/ESA_Section_7_Statue_Regulation_and_Policies/FWS_NMFS_jurisdictional_MOU.pdf.

38. 16 U.S.C. § 1533(a)(1) (2012).

39. *Id.* § 1532(6).

40. *Id.* § 1532(20).

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manmade factors affecting its continued existence.⁴¹ Each factor is equally important and if the Secretary decides that one or more of these factors has been met, she must, without discretion, issue a proposed rule recommending that the species be listed.⁴² There are currently 1,557 species listed as endangered or threatened in the United States, including 672 animal and 885 plant species.⁴³

2. Zoos and the ESA

Certain provisions of the ESA affect zoos in important ways. As of September 2014, zoos and aquariums housed at least 1000 threatened and endangered species.⁴⁴ The ESA applies to these animals, just as it does to their wild counterparts, with some exceptions. Notably, the Section 9 “taking” prohibition excludes “[a]nimal husbandry practices that meet or exceed the minimum standards for facilities and care under the Animal Welfare Act,” including exhibition, breeding procedures, and “provisions of veterinary care for confining, tranquilizing, or anesthetizing, when such practices, procedures, or provisions are not likely to result in injury to the wildlife.”⁴⁵

Also relevant to animal exhibitors, who often transport or receive animals for breeding or exhibition, Section 9 prohibits the “import of any [endangered] species into, or [the] export of any such species from the United States.”⁴⁶ However, there are several exceptions to this rule. First, there is an exemption for animals that were held in captivity prior to the enactment of the ESA or were captive at the time of listing.⁴⁷ In addition, Section 10 of the Act allows the FWS to permit “any act otherwise prohibited by section [9] . . . for scientific purposes or to enhance

41. *Id.* § 1533(a)(1).

42. *See id.*

43. *Summary of Listed Species, Listed Populations and Recovery Plans*, U.S. FISH & WILDLIFE SERV., http://ecos.fws.gov/tess_public/pub/boxScore.jsp (last updated Sept. 20, 2014).

44. *Zoo and Aquarium Statistics*, ASS’N OF ZOOS & AQUARIUMS, <http://www.aza.org/zoo-aquarium-statistics/> (last updated Sept. 2014).

45. 50 C.F.R. § 17.3 (2014).

46. 16 U.S.C. § 1538(a)(1)(A).

47. *Id.* § 1538(b)(1).

the propagation or survival of the affected species.”⁴⁸ Therefore, exhibitors must obtain a FWS permit before importing or exporting non-“pre-Act” animals. As part of the permitting process, the FWS is required to publish notice of each permit application in the Federal Register, accept written comments from interested parties, and make public any information received as part of the application.⁴⁹ As stated in the Act, FWS should only grant a permit where the applicant demonstrates that the activity in question will enhance the survival of the species and the issuance of the permit “will be consistent with the purposes and policy” of the ESA.⁵⁰

B. Other Laws Affecting Zoo Animals

1. Animal Welfare Act

The Animal Welfare Act (“AWA”) sets minimum standards for the treatment and care of all captive, warm-blooded animals—both endangered and otherwise.⁵¹ As enacted in 1966, the AWA was intended “to insure . . . humane care and treatment” and “to assure the humane treatment of animals during transportation.”⁵² The Act also protects zoo animals, regulating both animal dealers and exhibitors.⁵³ Administered by the Secretary of Agriculture, the AWA is the only federal statute protecting the welfare of individual zoo animals.⁵⁴ Under the Act, any facility that exhibits animals must be registered and licensed by the USDA, and is responsible for monitoring and record-keeping.⁵⁵

48. *Id.* § 1539(a)(1)(A).

49. *Id.* § 1539(c).

50. *Id.* §§ 1539(a)(1)(A), (d). The FWS must also publish a finding in the Federal Register that the exceptions were applied for in good faith and that the exceptions will not operate to the disadvantage of such endangered species. *Id.* § 1539(d).

51. *See* Animal Welfare Act, 7 U.S.C. §§ 2131-2159 (2012).

52. *Id.* §§ 2131(1), (2).

53. *Id.* § 2131.

54. GRECH, *supra* note 6.

55. *Id.*

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The Act is limited, however, by both its scope and by a lack of enforcement.⁵⁶ Enforcement has proven difficult given the department's limited resources and the lack of a citizen suit provision in the Act. Another weakness is that it sets forth only minimum standards, while failing to address the psychological well being of animals.⁵⁷

2. Species-Specific Federal Laws

Some federal laws provide protection for select species. The African Elephant Conservation Act of 1989, for example, established a fund to provide assistance to African countries for elephant research and conservation projects.⁵⁸ In addition, it allowed the United States government to ban elephant ivory imports, imposing a civil penalty on any person who does so.⁵⁹ Similarly, the Great Apes Conservation Act of 2000 provides financial assistance to countries with great ape habitats.⁶⁰ Other examples of species-specific protections include the Rhinoceros and Tiger Conservation Act of 1994⁶¹ and the Asian Elephant Conservation Act.⁶² Unfortunately, these federal statutes lack enforcement mechanisms, which limits their effectiveness.⁶³

3. State Laws

States may implement and enforce their own animal protection laws, as long as they are at least as strict as the AWA.⁶⁴ Currently, every state in the country has enacted an animal cruelty law.⁶⁵ Many of these statutes provide little

56. *Id.*

57. *Id.*

58. 16 U.S.C. § 4203 (2012).

59. *Id.* §§ 4223, 4224(b).

60. 16 U.S.C. § 6303(a) (2012).

61. Rhinoceros and Tiger Conservation Act, **16 U.S.C. §§ 5301-5306 (2012)**.

62. Asian Elephant Conservation Act, 16 U.S.C. §§ 4261-66 (2012).

63. GRECH, *supra* note 6.

64. *See* 7 U.S.C. § 2143(a)(8); *see, e.g.*, Zimmerman v. Wolff, 622 F. Supp. 2d 240 (E.D. Pa. 2008) (holding that Pennsylvania state law did not conflict with AWA because both worked in concert for mutual purpose of protecting animals).

65. GRECH, *supra* note 6.

protection for zoo animals, however, as only the provisions regarding the most extreme forms of cruelty are regularly enforced.⁶⁶ In addition, the definition of “animal” varies from state to state, causing many states to exempt entire categories of animals from protection.⁶⁷ While Pennsylvania explicitly protects zoo animals in captivity,⁶⁸ several states, including Georgia,⁶⁹ Idaho,⁷⁰ Missouri,⁷¹ New Jersey,⁷² and Washington,⁷³ exempt zoo animals entirely.

C. Association of Zoos and Aquariums Accreditation

In addition to complying with the laws above, some zoos and aquariums voluntarily seek accreditation by the Association of Zoos and Aquariums (“AZA”).⁷⁴ A panel of experts, called the AZA Accreditation Commission, carefully examines each applicant for membership, accepting only those facilities that meet the AZA’s rigorous standards for animal management and care.⁷⁵ Among other things, the AZA monitors animal exhibits, social groupings and enrichment, health and nutrition, safety policies and procedures, contribution to conservation and scientific research, and public education.⁷⁶ An institution, once approved, must go through the accreditation process every five years, which requires more than six months of time to complete.⁷⁷ Member organizations are able to participate in AZA programs

66. *Id.*

67. *Id.* (only Minnesota, Mississippi, and Oklahoma provide no exemptions).

68. 18 PA. CONS. STAT. § 5511 (2012).

69. GA. CODE ANN. §§ 27-2-13 (2011).

70. IDAHO CODE ANN. § 25-3514(9) (2012).

71. MO. REV. STAT. § 578.007(4) (2013).

72. N.J. STAT ANN. § 4:22-26(m) (West 2014).

73. WASH. REV. CODE § 16.52.011 (2014).

74. “Founded in 1924, the Association of Zoos and Aquariums . . . is a nonprofit 501c (3) organization” working with zoos to advance conservation and education efforts. *About AZA*, ASS’N OF ZOOS & AQUARIUMS, <http://www.aza.org/about-aza/> (last visited Sept. 9, 2014).

75. *What is Accreditation?*, ASS’N OF ZOOS & AQUARIUMS, <http://www.aza.org/what-is-accreditation/> (last visited Sept. 9, 2014).

76. *How does Accreditation Work?*, ASS’N OF ZOOS & AQUARIUMS, <http://www.aza.org/becoming-accredited/> (last visited Sept. 9, 2014).

77. *Id.*

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such as animal exchanges with other AZA facilities for breeding purposes and the Species Survival Plan (“SSP”), a program that cooperatively manages specific, usually threatened or endangered species.⁷⁸ Unfortunately, fewer than ten percent of the approximately 2,800 animal exhibitors licensed by the USDA are AZA accredited.⁷⁹

IV. THE ROLE OF ZOOS IN PRESERVING ENDANGERED SPECIES

Perhaps due in part to the somewhat lackluster protections provided to zoo animals, the proper role of zoos in rehabilitating endangered species has long been a topic for debate. Some conservationists claim the preservation of endangered species in captive environments contravenes the very purpose of the ESA, stating that “[d]omestication deprives wild creatures of their aura, their magic, the essence for which we should be protecting them,” and is therefore inconsistent with the Endangered Species Act, the intent of which is to protect wild species.⁸⁰ This conclusion ignores, however, the great potential of zoos to preserve species in the wild, and views zoos as obstacles to this goal rather than as valuable partners in achieving it.

Protecting animals in the wild is a noble goal, and one that most reputable zoos and aquariums support. In fact, the work that these institutions perform reflects a growing consciousness of the value of wildlife, and a need to protect both individual species and the ecosystems upon which they rely. Zoos and similar facilities can support the goals of the ESA in a number of ways. Three of these—captive breeding and reintroduction programs, contributions to conservation, and environmental education—are discussed below.

78. *Species Survival Plan Programs*, ASS’N OF ZOOS & AQUARIUMS, <https://www.aza.org/species-survival-plan-program/> (last visited Sept. 9, 2014); *What is Accreditation?*, *supra* note 75.

79. *What is Accreditation?*, *supra* note 75.

80. Holly Doremus, *Restoring Endangered Species: The Importance of Being Wild*, 23 HARV. ENVTL. L. REV. 1, 3 (1999).

A. Captive Breeding and Reintroduction Programs

Through its SSP programs, AZA works with accredited zoos and aquariums and approved non-member facilities to properly manage animal populations in need of protection.⁸¹ The program's stated mission is to "oversee the population management of select species within AZA member institutions . . . and to enhance conservation of this species in the wild."⁸² More than 500 such programs currently exist, safeguarding a variety of species, such as the giant panda, lowland gorilla, and California condor.⁸³ By 1980, due to successful breeding programs throughout the country, nearly ninety percent of American zoo mammals were born in captivity.⁸⁴

Reintroduction programs, through which captive-raised animals are released into their natural habitats, are powerful tools for re-establishing or enlarging vulnerable wild populations.⁸⁵ Both wild born individuals—often rehabilitated animals—and captive-born animals might be released.⁸⁶ In the case of captive-born animals, individuals often spend time in a "head-start" program by which their chance of survival in the wild is improved.⁸⁷ Along with FWS and the International Union for the Conservation of Nature, AZA has been instrumental to the advancement of reintroduction-related science and the implementation of programs in which its member institutions participate.⁸⁸ The black-footed ferret, California condor, and red wolf are just three examples of numerous similar SSP success stories.⁸⁹

81. *Species Survival Plan Programs*, *supra* note 78.

82. ASS'N OF ZOOS & AQUARIUMS, AZA SPECIES SURVIVAL PLAN PROGRAM HANDBOOK 7 (2014), available at https://www.aza.org/uploadedFiles/Animal_Care_and_Management/TAGs,_SSPs,_PMPs,_Studbooks,_SAGs/AZASpeciesSurvivalPlanProgramHandbook2014.pdf.

83. *Species Survival Plan Programs*, *supra* note 78.

84. Kohn, *supra* note 8, at 236.

85. *Reintroduction Programs*, ASS'N OF ZOOS & AQUARIUMS, <http://www.aza.org/reintroduction-programs/> (last visited Sept. 9, 2014).

86. *Id.*

87. *Id.*

88. *Id.*

89. *Id.*

1. A Case Study: Red Wolf Recovery

The ongoing red wolf recovery program in the Southeastern United States is a premier example of zoos working with FWS to preserve an endangered species. Named for its characteristic reddish fur, the red wolf is a social animal.⁹⁰ It lives and travels in packs of five to eight individuals, consisting of an adult breeding pair and its offspring.⁹¹ It preys primarily on mammals, including deer, raccoons, rabbits, and small rodents.⁹² As a predator, the red wolf plays an important role in maintaining the health of its ecosystem by controlling populations of prey species and removing unhealthy animals.⁹³

Once common throughout the Eastern and South Central United States, the red wolf's population dwindled during the early twentieth century due to a combination of aggressive predator control programs and increased deforestation.⁹⁴ By 1973, when the species was listed as "endangered" under the ESA, less than 100 red wolves occupied a small area of coastal Texas and Louisiana.⁹⁵

In order to simultaneously prevent extinction and restore ecosystems throughout which red wolves once roamed, FWS captured as many of the remaining animals as possible with the ultimate goal of eventually reintroducing captive-bred animals to their natural habitat.⁹⁶ Of the captured red wolves, only fourteen met the stringent criteria required to become a founder of a new, genetically healthy red wolf population.⁹⁷ One of the most

90. *What is a Red Wolf?*, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/redwolf/naturalhistory.html> (last updated Oct. 17, 2014).

91. *Id.*

92. *Id.*

93. U.S. FISH & WILDLIFE SERV., ENDANGERED RED WOLVES 3 (1997), available at http://nctc.fws.gov/Pubs4/endangered_red_wolves.pdf.

94. *Red Wolf Recovery Efforts*, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/redwolf/redwolfrecovery.html> (last updated Oct. 17, 2014).

95. *Id.*

96. *See Captive Management*, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/redwolf/captivemanagement.html> (last updated Aug. 28, 2014).

97. *Id.*

important of these criteria was that chosen breeders were pure red wolves, rather than wolf-coyote hybrids.⁹⁸

The captive wolf population was housed at the Point Defiance Zoo and Aquarium in Tacoma, Washington.⁹⁹ While caring for the wolves, the zoo worked to recruit other institutions to house wolves and, in 1984, worked with AZA to establish a red wolf SSP program to manage a growing captive wolf population.¹⁰⁰

By 1987, enough wolves had been born in captivity to begin releasing red wolves into their former habitats, starting with the Alligator River National Wildlife Refuge in northeastern North Carolina.¹⁰¹ A year after reintroduction, the first litter of wild red wolf pups was born.¹⁰² Following the success at Alligator River, wolves were reintroduced to the Great Smoky Mountains Park in Tennessee and to coastal islands off the coasts of Florida, Mississippi, and South Carolina.¹⁰³ Each newly released wolf was fitted with a radio transmitter, which allows biologists to locate and track each animal.¹⁰⁴

By the late twentieth century, red wolf restoration seemed to be a success-in-the-making. By 1996, red wolf populations were successfully hunting and reproducing in the wild, and about ninety percent of free ranging wolves in North Carolina were born in the wild.¹⁰⁵ Meanwhile, regional support for wolf restoration was strong and growing.¹⁰⁶ Today, more than 100

98. *Red Wolf Recovery Efforts*, *supra* note 94.

99. *Captive Management*, *supra* note 96; see generally *Red Wolf Conservation*, POINT DEFIANCE ZOO & AQUARIUM, <http://www.pdza.org/red-wolf-conservation/> (last visited Sept. 8, 2014).

100. *Captive Management*, *supra* note 96; *Red Wolf Conservation*, *supra* note 99.

101. *Red Wolf Recovery Efforts*, *supra* note 94.

102. *Recovery Timeline*, U.S. FISH & WILDLIFE SERV., <http://www.fws.gov/redwolf/timeline.html> (last updated Oct. 17, 2014).

103. *Id.*

104. *Red Wolf Conservation*, *supra* note 99.

105. U.S. FISH & WILDLIFE SERV., *supra* note 93, at 8.

106. A 1997 study by Cornell University showed strong regional support for red wolf recovery, including a willingness to contribute to the program. Roger Segelken, *Economic Impact Estimated at \$170 Million Annually from Red Wolves in Great Smoky Mountains and Eastern North Carolina*, CORNELL CHRON. (Mar. 11, 1997), <http://news.cornell.edu/stories/1997/03/reintroduced->

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individuals occupy former red wolf territory, covering more than 1.7 million acres of land in North Carolina.¹⁰⁷ In 2013, thirty-four pups were born in the wild, with an additional five born in captivity.¹⁰⁸

Red wolf recovery has been a shining example of multiple institutions working together to benefit an endangered species. Thus far, more than thirty zoos and nature centers in twenty-one states and the District of Columbia have participated in the national red wolf breeding program.¹⁰⁹ The unique characteristics of zoos make them an ideal partner for the FWS. First, when a population is extremely small, as in the case of the red wolf, survival can be affected by genetic drift or decreased gene diversity, which can lead to inbreeding depression.¹¹⁰ Through SSP programs, zoos are well placed to successfully maintain healthy and genetically diverse animal populations.¹¹¹ In the controlled environment of a zoo, where detailed records are kept, animal caretakers can determine which individuals should be allowed to breed in order to ensure the maximum chance of survival for an at-risk species.¹¹²

In addition to housing wolves and managing captive breeding programs, zoos continue to assist red wolf restoration efforts by training field personnel involved in the restraint and capture of wild wolves, applying captive research to the field, helping to reintroduce animals to the wild, informing visitors about the value of wolves to ecosystems, and inspiring the public to support wolf restoration.¹¹³

While red wolf recovery has been considered a great success, there is still work to be done. When the red wolf was first listed as endangered, the wolf's recovery plan aimed to reach a population of 550, consisting of at least three wild populations

wolves-face-little-opposition-and-boost-tourism-east-cornell-survey. The study also noted the tourism-related benefits related to wolf recovery. *Id.*

107. *Red Wolf Recovery Efforts*, *supra* note 94.

108. *Id.*

109. U.S. FISH & WILDLIFE SERV., *supra* note 93, at 2.

110. *Captive Management*, *supra* note 96.

111. *See Species Survival Plan Programs*, *supra* note 78.

112. *Id.*

113. *Captive Management*, *supra* note 96.

totaling 220 animals and 330 animals in captivity in thirty or more facilities.¹¹⁴ With only about 100 individuals in the wild to date,¹¹⁵ zoos will continue to play an invaluable role in the wolf's recovery.

B. Contributions to Conservation

Zoos can act as conservation centers, protecting ecosystems in diverse ways – by contributing to the current body of scientific research and by participating in, or financially supporting, conservation initiatives supporting species ecosystem recovery in the wild. According to AZA's 2012 Annual Report on Conservation Science, AZA accredited facilities alone spent \$160 million on over 2,750 conservation initiatives in more than 100 countries.¹¹⁶

In addition, many zoos work to increase our understanding of, and benefit the health or welfare of, animals in the wild through original scientific research. The controlled environment of a zoo offers an ideal location for observational studies. In addition, through positive reinforcement-based training, animals voluntarily participate in behavioral and physiological studies.¹¹⁷ One such observational study is discussed below.

1. A Case Study: Interpreting Whale Breath

At the Mystic Aquarium and Institute for Exploration, researchers are learning to use a whale's breath to measure reproductive and stress hormones.¹¹⁸ Progesterone and testosterone levels in a whale's blow, for example, may indicate sex and reproductive maturity, and stress-related hormone levels may be indicative of an animal population's health.¹¹⁹ Breath

114. U.S. FISH & WILDLIFE SERV., *supra* note 93, at 3.

115. *Red Wolf Recovery Efforts*, *supra* note 94.

116. *Zoo & Aquarium Field Conservation*, ASS'N OF ZOOS & AQUARIUMS, <http://www.aza.org/annual-report-on-conservation-and-science/> (last visited Sept. 8, 2014).

117. *See infra* Part IV(B)(1).

118. Rebecca Kessler, *A Wealth of Data in Whale Breath*, N.Y. TIMES, Sept. 30, 2013, http://www.nytimes.com/2013/10/01/science/a-wealth-of-data-in-whale-breath.html?pagewanted=all&_r=1&.

119. *Id.*

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samples provide a non-invasive method for detecting these changes in wild animals, allowing conservationists to better manage whale populations.¹²⁰

Mystic's team of beluga whale trainers has been essential to the project. Using positive reinforcement techniques, in which an animal is rewarded for correct behavior, Mystic's beluga whales have learned to place their chins on the deck of the pool and to breathe on command.¹²¹ By placing a petri dish over the whale's blowhole, researchers can collect and study the resulting vapor.¹²²

While this research may improve the health of captive whales and dolphins, the ultimate goal is to develop a non-intrusive way to study similar species in the wild.¹²³ Large whales, such as baleen whales, are particularly elusive, spending much of their time far from shore and underwater.¹²⁴ As a result, traditional research methods such as restraint and capture techniques and blood and feces collection are largely impractical, as well as potentially stressful and dangerous for animals and researchers.¹²⁵ Breath collection, on the other hand, may provide an effective, non-intrusive way to study these animals.

Many species of large whales are vulnerable, still recovering from centuries of overexploitation by commercial whaling.¹²⁶ The same species are threatened by ship strikes, entanglement in fishing gear, noise and water pollution, and the effects of climate change.¹²⁷ Such pressures on an animal population may elicit

120. *Id.*

121. *Id.*

122. *Id.*

123. *See id.*

124. Kathleen E. Hunt et al., *Overcoming the Challenges of Studying Conservation Physiology in Large Whales: A Review of Available Methods*, 1 CONSERVATION PHYSIOLOGY 1, 2 (2013), available at <http://conphys.oxfordjournals.org/content/1/1/cot006.full.pdf+html>.

125. *Id.*

126. *See, e.g.*, Editorial, *Ceaseless Pressure on Whales*, N.Y. TIMES, May 10, 2013, http://www.nytimes.com/2013/05/11/opinion/ceaseless-pressure-on-whales.html?_r=0.

127. *See* Bjorn Carey, *Noise Pollution Disrupts Whale Communication: Acoustic 'Smog' from Ships Could Affect Navigation, Mating*, NBCNEWS.COM, http://www.nbcnews.com/id/7003587/ns/technology_and_science-science/t/noise-pollution-disrupts-whale-communication/#.VAjjXvldWSp (last updated Feb. 20,

physiological responses, which can be detected in individual animals long before a population-wide impact is apparent.¹²⁸ Among these physiological responses are elevations in cortisol, a stress-related hormone, and declines in reproductive hormones.¹²⁹ Breath samples could detect these changes, allowing conservationists to better manage whale populations.¹³⁰

Zoos and aquariums provide the perfect setting to study and perfect this technique. In addition to breathing on command, Mystic's belugas have learned to present their tail flukes so that a blood sample can be taken, to provide fecal samples, and to open their mouth for a saliva swab.¹³¹ This allows researchers to compare results from all four bodily fluids, assuring that breath capture is, in fact, providing reliable information.¹³² Moreover, with their subjects in a captive environment, researchers can monitor and control every aspect of the whales' lives, including age, health, diet, and water quality and temperature.

C. Environmental Education

In addition to their conservation work, many zoos have become important education centers. More than 175 million people visit AZA accredited zoos each year.¹³³ Through educational presentations and animal encounters, zoos can inspire current and future generations to take a more active role in preserving vulnerable species and ecosystems.

2005, 1:53 PM); *see also* Douglas P. Nowacek, *Global Warming Affects Whales in the Short and Long Terms*, N.Y. TIMES, Jan. 11, 2013, <http://www.nytimes.com/roomfordebate/2013/01/10/did-we-save-the-whales-19/global-warming-affects-whales-in-the-short-and-long-terms>; *Study Reveals How Fishing Gear Can Cause Slow Death of Whales*, WOODS HOLE OCEANOGRAPHIC INST. (May 21, 2013), <https://www.whoi.edu/main/news-releases?tid=3622&cid=169130>; *Whales and Pollution*, WORLD WILDLIFE FUND, http://www.wwf.org.au/our_work/saving_the_natural_world/wildlife_and_habitats/australian_priority_species/whales/threats_to_whales/whales_and_pollution/ (last visited Sept. 10, 2014).

128. Hunt et al., *supra* note 124, at 2.

129. Kessler, *supra* note 118.

130. *Id.*

131. *Id.*

132. *Id.*

133. *Visitor Demographics*, ASS'N OF ZOOS & AQUARIUMS, <http://www.aza.org/visitor-demographics/> (last visited Sept. 10, 2014).

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In summary, this section highlights the great potential of zoos to fulfill the purpose of the ESA, to preserve species in the wild, through captive breeding and reintroduction programs, original scientific research, conservation initiatives, and educational programs. However, not all animal exhibitors are reaching or even striving to meet this potential. As such, when considering granting a permit under Section 10 of the ESA, FWS must be extremely cautious in determining whether an animal exhibitor will “enhance the . . . survival” of a species.¹³⁴

V. A RECENT CASE: *PETA V. FWS*

FWS faces a distinct challenge in determining when to permit a generally prohibited act under the ESA, particularly in the context of captive animals. This Part introduces a recent case, *PETA v. U.S. Fish & Wildlife Service*, which illustrates this challenge. It then suggests four factors that could be applied to determine whether an FWS-issued permit granted to an animal exhibitor will “enhance the . . . survival” of the species in the wild.¹³⁵ Finally, it applies these factors to the facts of the recent case.

A. The Facts

In August 2013, PETA filed suit against FWS in the United States District Court for the District of Columbia, challenging fifteen permits issued to the Hawthorn Corporation to export and re-import endangered Tigers into Canada.¹³⁶ Tigers (*Panthera tigris*) were listed as endangered in 1970.¹³⁷ As an endangered species, the import and export of tigers is generally prohibited under the ESA. Therefore, in accordance with Section 10 of the Act, the Hawthorn Corporation applied for and was granted

134. 16 U.S.C. § 1539(a)(1)(A) (2012).

135. *Id.*

136. Complaint, *supra* note 2, at 2.

137. *Species Profile: Tiger (Panthera tigris)*, U.S. FISH & WILDLIFE SERV., <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A043> (last updated Sept. 10, 2014).

FWS-issued “enhance[ment] of . . . survival” permits.¹³⁸ The permits authorize Hawthorn to import the tigers to perform in circus acts throughout Canada, allegedly in violation of the ESA.¹³⁹ Although the case was ultimately dismissed on mootness grounds,¹⁴⁰ it is particularly relevant given PETA’s claim that FWS routinely issues similar permits in violation of the Act.¹⁴¹ In addition, it provides an ideal case study for interpreting the meaning of “enhancement of survival” under the Act.

Specifically, PETA claimed that FWS waived the requirement that the permitted activity enhance the survival of the species in the wild in lieu of apparently vague promises by Hawthorn to contribute to conservation programs in the future.¹⁴² Under the ESA, a permit is proper where an applicant can demonstrate that the activity in question will directly enhance the survival of the species in the wild,¹⁴³ while furthering the goals of the Act.¹⁴⁴ In other words, for the court to uphold the permits in this case, it would have had to find that importing the tigers into Canada for use in circus shows would enhance the survival of that species as a whole. As such, the meaning of the phrase “enhance the survival of” is critically important.

138. *PETA v. U.S. Fish & Wildlife Serv.*, No. 13-civ-01209 (RCL), 2014 WL 3686113, at *2 (D.D.C. July 18, 2014).

139. Complaint, *supra* note 2, ¶ 1, at 1-2; *see also PETA v. U.S. Fish & Wildlife Serv.*, 2014 WL 3686113, at *4.

140. On July 28, 2014, the District Court granted FWS’s motion to dismiss on mootness grounds as the FWS permits in question expired prior to the case being heard. *PETA*, 2014 WL 3686113, at *6. With the expiration of the permits in October 2013, the fifteen tigers were returned to the United States. *Id.* at *1. In the conclusion of its opinion, the Court states, “[i]f FWS’s actions really were as typical as PETA seems to think, then FWS will inevitably provide PETA another opportunity to seek review of a fundamentally similar action.” *Id.* at *6.

141. *PETA*, 2014 WL 386113, at *2.

142. Complaint, *supra* note 2, ¶ 32, at 12.

143. 16 U.S.C. § 1539(a)(1)(A) (2012).

144. *Id.* § 1539(d).

B. Interpreting “Enhancement of Survival”

“Enhancement of survival” is not defined in the ESA. However, 50 C.F.R. § 17.3 defines it in reference to captive animals as the following:

Enhance the propagation or survival . . . includes but is not limited to the following activities when it can be shown that such activities would not be detrimental to the survival of wild or captive populations of the affected species:

Provision of health care, management of populations by culling, contraception, euthanasia, grouping or handling of wildlife to control survivorship and reproduction, and similar normal practices of animal husbandry needed to maintain captive populations that are self-sustaining and that possess as much genetic vitality as possible;

Accumulation and holding of living wildlife that is not immediately needed or suitable for propagative or scientific purposes, and the transfer of such wildlife between persons in order to relieve crowding or other problems hindering the propagation or survival of the captive population at the location from which the wildlife would be removed; and

Exhibition of living wildlife in a manner designed to educate the public about the ecological role and conservation needs of the affected species.¹⁴⁵

The above regulation emphasizes animal health, species management, husbandry practices, and education, suggesting that these factors should receive significant consideration when granting a permit. Despite these guidelines, the FWS permitting process has often been criticized, allegedly transforming “an act of specific stages and clear commands into an act of discretion.”¹⁴⁶

In *ASPCA v. Ringling Bros. & Barnum & Bailey Circus*, for example, an animal rights organization brought an action against a circus owner, alleging that the owner beat the African

145. 50 C.F.R. § 17.3 (2014).

146. Oliver A. Houck, *The Endangered Species Act and Its Implementation by the U.S. Departments of Interior and Commerce*, 64 U. COLO. L. REV. 277, 279 (1993).

elephants in his care in violation of the ESA.¹⁴⁷ Plaintiffs argued that the FWS issued the permit “to enhance the propagation or survival” of the species, and that the defendant’s treatment of its animals contravened that purpose.¹⁴⁸ Though the court ultimately determined it lacked jurisdiction to decide if the permit had been properly enforced,¹⁴⁹ the case raised considerable concerns about FWS’s seemingly arbitrary interpretation of “enhancement of survival.”

Ultimately, “enhancement of survival” must be interpreted to further the goals and purposes of the ESA—to protect species *in the wild*. This presents a challenge to the FWS in determining whether to issue an “enhancement of survival” permit to an animal exhibitor. As discussed above, zoos have great potential to preserve species, but not all do.

As the issuance of a permit must be “consistent with the purposes and policy” of the Act,¹⁵⁰ FWS must consider each facility on a case-by-case basis. In doing so, it should look to both its own regulations as well as industry standards. Based on regulation, which emphasizes careful animal husbandry and education in its definition of “enhancement of survival,” and the AZA’s widely respected accreditation scheme, this article suggests the following factors as helpful in determining a facility’s potential and likelihood of enhancing species survival: the facility’s 1) stated mission; 2) contribution to conservation, both financial and otherwise; 3) participation in captive breeding and/or reintroduction programs; and 4) emphasis on education and overall message to the public.

1. Stated Mission

Many zoos and similar facilities express their intent to act as conservation and education centers through their mission statements. A mission statement may provide important information on a facility’s goals and priorities. For example, the

147. *ASPCA v. Ringling Bros. & Barnum & Bailey Circus*, 502 F. Supp. 2d 103, 105 (D.D.C. 2007).

148. *Id.* at 111 (internal quotations omitted).

149. *Id.* at 111-12.

150. 16 U.S.C. § 1539(d) (2012).

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Wildlife Conservation Society, which manages the Bronx Zoo, Central Park Zoo, and the New York Aquarium, states it is their “clear mission to save wildlife and wild places across the globe.”¹⁵¹ The National Zoo similarly says, “[a]t the Smithsonian’s National Zoo, we save species. We provide engaging experiences with animals and create and share knowledge to save wildlife and habitats.”¹⁵²

In the case at issue, *PETA v. U.S. Fish & Wildlife Service*, the court should consider the Hawthorn Corporation’s mission and those of the circuses to which they lease animals. Circus shows are often criticized because they are designed solely to entertain. The well-known Ringling Brothers, for example, promoted a recent circus show, entitled “Built to Amaze,” in the following way: “Surprise and wonder delights audiences with over the top feats of strength, agility and courage . . . Magnificent elephants, ferocious tigers, astonishing acrobats and awe-inspiring aerialists are engineered into one spectacular performance.”¹⁵³

Noticeably absent from their webpage is any mention of animal welfare, conservation, or education. When a permit is granted pursuant to Section 10 to enhance the survival of a species, the rationale cannot be to exploit animals for entertainment or profit, but must be to aid in conservation through actions that directly benefit wild animals and ecosystems. To find otherwise contravenes the purpose of the ESA.¹⁵⁴

151. *About Us*, WILDLIFE CONSERVATION SOC’Y, <http://www.wcs.org/about-us.aspx> (last visited Sept. 10, 2014).

152. *About Us: Mission - Smithsonian National Zoo*, SMITHSONIAN NAT’L ZOOLOGICAL PARK, <http://nationalzoo.si.edu/aboutus/mission/> (last visited Sept. 10, 2014).

153. *About the Show: Built to Amaze*, RINGLING BROTHERS & BARNUM & BAILEY, <http://www.ringling.com/ContentPage.aspx?id=46822&parentID=1409&assetFolderID=1410> (last visited Sept. 10, 2014).

154. See Elizabeth A. Moore, “*I’ll Take Two Endangered Species, Please*”: *Is the Commercialization of Endangered Species a Valid Activity that Should be Permitted Under the Endangered Species Act to Enhance the Survival of the Species?*, 75 GEO. WASH. L. REV. 627, 628 (2007).

2. Contributions to Conservation

As discussed at length in Part IV, many zoos preserve species and ecosystems by financing and participating in conservation initiatives and/or producing scientific research to benefit wild animals. In the case of Section 10 exemptions, the activity in question must directly benefit the species in the wild.¹⁵⁵ In this case, FWS has allegedly granted permits on the basis of Hawthorn's vague promise to make future contributions to conservation initiatives in what PETA calls a "[p]ay-to-[p]lay" scheme.¹⁵⁶ If true, this scheme surely contravenes the purpose of the ESA to protect species where Hawthorn neither participates in conservation initiatives directly nor adds to the current body of scientific research.

3. Captive Breeding and Reintroduction Programs

As discussed above, many zoos seek to increase endangered populations through rehabilitation and release as well as captive breeding programs, such as participation in an AZA Species Survival Plan program. Red wolf recovery is one such example of an AZA Species Survival Plan. Neither Hawthorn nor the circuses to which it leases its animals are registered in SSP programs.¹⁵⁷ Instead, Hawthorn is in the business of leasing animals to circuses. Hawthorn's lack of involvement in similar rehabilitation and release and captive breeding programs is further evidence that the issuance of permits to the corporation will not serve to preserve species in the wild.

155. See 16 U.S.C. § 1539(a)(1)(A) (2012); see also U.S. FISH & WILDLIFE SERV., PERMITS FOR NATIVE SPECIES UNDER THE ENDANGERED SPECIES ACT 1 (2013), available at <http://www.fws.gov/ENDANGERED/esa-library/pdf/permits.pdf>.

156. See generally Complaint, *supra* note 2.

157. *Species Survival Plan Programs*, *supra* note 78; *Lists of Accredited Zoos & Aquariums*, ASS'N OF ZOOS & AQUARIUMS, <https://www.aza.org/current-accreditation-list/> (last visited Oct. 20, 2014); *Lists of Certified Related Facilities*, ASS'N OF ZOOS & AQUARIUMS, <https://www.aza.org/current-cert/> (last visited Oct. 20, 2014).

4. Educational Value and Message to the Public

Finally, the message a zoo projects to the public is crucially important. Whereas some animal exhibitors serve as animal welfare advocates, showcase animals in a natural setting, and seek to educate visitors through informative presentations and signage, there is little educational value in a circus show. Again, the purpose of the traditional circus show is not to inform or inspire, but to entertain.¹⁵⁸ Rather than showcasing a species' natural behaviors, animals are taught to perform unnatural behaviors purely for the pleasure of the audience. Species are exhibited in non-natural surroundings, without the benefit of staff or signage to educate the public.

Most notably, Hawthorn has also been criticized for its animal care tactics. The USDA has issued more than sixty citations for Hawthorn's failure to provide its animals with proper veterinary care, nutrition, exercise, and safe and sanitary enclosures in violation of the AWA.¹⁵⁹ USDA enforcement actions against Hawthorn have entailed license suspensions, more than \$250 million in penalties, and confiscation or surrender of at least seventeen exotic animals.¹⁶⁰

An examination of the above factors in the context of *PETA v. U.S. Fish & Wildlife Service* suggests that import of the tigers in question to perform in circus shows would not "enhance the survival" of that species, as intended by the ESA. A contrary finding ignores the requirement that the permitted activity directly benefit the species in the wild. Allowing Hawthorn to contribute money to conservation in lieu of direct contributions through species management, research, or educational programs contravenes the very purpose of the Act.

158. RINGLING BROTHERS & BARNUM & BAILEY, *supra* note 153.

159. *Hawthorn in Double Trouble over Tigers*, THE PETA FILES, <http://www.peta.org/b/thepetafiles/archive/2013/02/14/urge-usda-to-revoke-license-of-lawbreaking-elephant-and-tiger-abuser.aspx> (last updated Feb. 14, 2013).

160. *Id.*

VI. CONCLUSION

With the effects of climate change and habitat loss becoming more distinct, zoos, aquariums, and other animal exhibitors will play an increasingly important role in species preservation. Already, some zoos serve as conservation centers, protecting wildlife through species rehabilitation and reintroduction, scientific research, conservation initiatives, and public education. Red wolf recovery is just one example of how a zoo's unique characteristics and controlled environment can help to save species. At the same time, Mystic Aquarium's whale breath sampling study demonstrates the potential of zoos to add to current scientific understanding, inevitably benefiting species in the future.

Despite the great potential of zoos to protect species in the wild, some animal exhibitors struggle to meet basic animal welfare standards. Because exhibitors vary in terms of size, mission, and quality of care, it is challenging to evaluate an animal exhibitor's potential to enhance a species' survival. Because FWS must make this finding in order to grant a permit in accordance with Section 10 of the ESA, interpretation and application of the phrase "enhancement of survival" is critically important.

During the permitting process, the Service should consider industry standards. In accord with AZA's own strict criteria, FWS should look to a number of factors, including the facilities stated mission, contributions to species conservation, and educational value. In doing so, FWS can assure that only those facilities whose own goals align with those of the Act are responsible for the most vulnerable species' wellbeing.