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Improving Care and Licensing Standards and Oversight in America's Zoos

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IMPROVING CARE AND LICENSING STANDARDS AND OVERSIGHT IN AMERICA'S ZOOS

By
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ABSTRACT
HANNAH WILLIS: Improving Care and Licensing Standards and Oversight in America's Zoos
(Under the direction of Dr. Melissa Bass)

Since 1966, the Animal Welfare Act has been the official federal legislation passed to provide care standards and regulations for publicly exhibited animals, specifically exotic animals within zoos; however, in an age of major advocacy for improved animal welfare standards for all animals, the AWA has remained fairly stagnant in its guidelines for animal exhibitors. Through numerous articles, documentaries, and TV shows, specific zoos and animal exhibitors have shown many Americans that there seems to be little to no governmental oversight over zoos that have engaged in poor animal care or those engaging in often dangerous and cruel animal contact and breeding programs. This study seeks to understand the various organizations and acts governing zoos and the ways that they each impact animal care in order to offer potential policy solutions to improve the level of care and oversight in zoos. To accomplish this, I conducted a comparative analysis of USDA, AZA, and ZAA licensing/accreditation qualifications, their inspection protocols, and their care standards for zoo animals, and then five semi-structured interviews of zoo staff from across the US. The comparative analysis shows that the USDA's standards and protocols are significantly less as compared to the accreditation organizations' standards. As a result of the interviews, I found that many within the zoo industry believe that the AWA prevents outright cruelty towards animals but its welfare standards are minimal. As a potential policy solution I propose passing new legislation specifically for exhibitors and their animals with improved care standards along with placing sole licensing and enforcement of protective animal legislation under the Department of the Interior. Improving care and licensing standards along with oversight measures in America's zoos is key to ensuring that respect and care for wildlife is a priority within the US government and the zoo industry as a whole.

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LIST OF ABBREVIATIONS

APHIS	Animal and Plant Health Inspection Service
AWA	Animal Welfare Act
AZA	Association of Zoos & Aquariums
DOI	United States Department of the Interior
OMB	Office of Management and Budget
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
ZAA	Zoological Association of America

Chapter 1: Introduction

Animal exhibition, specifically through zoos, has been a part of American society officially for over a century. One of the first major zoos in the US was the National Zoological Park, as part of the Smithsonian Institute, established by Congress in 1889 under the direction of founder William Temple Hornaday (Smithsonian Institute Archives, n.d.). After Hornaday went on an expedition to the Western US and found that the native bison population was near extinction, he "pursued approval to create a national zoo, not only to entertain, but to educate, conduct research, and save endangered species" (Smithsonian Institute Archives, n.d.). Now a fixture in our nation's capital city, the National Zoo demonstrates what zoos mean to many Americans today, and since those early days of zoos and animal exhibition the industry has only continued to grow.

In the twenty-first century, zoos continue to play a large role in America's society both culturally and economically. As of 2018, there were roughly 2,800 wildlife exhibitors licensed by the United States Department of Agriculture (USDA) (Association of Zoos and Aquariums, 2018). The president of the Association of Zoos and Aquariums (AZA), notes that AZA accredited zoos, discussed extensively in this thesis, "see more than 186 million visitors, collectively generate more than $17 billion in annual economic activity, and support more than 175,000 jobs across the country" (Association of Zoos and Aquariums, 2018). Tribe (2004) found that roughly 90% of Americans have visited a zoo within their lifetime and 92% of visitors do so as part of a group.

Many licensed US zoos engage in local and international wildlife conservation initiatives such as the North Carolina Zoo that has helped protect Tanzania's wild vulture population (North Carolina Zoo, 2018), or the Sedgwick County Zoo that helped breed and released two Mexican Wolf pups into the wild to help the recovery of this endangered species (Hall, 2019). On the other hand, many licensed US zoos have engaged in inhumane and often cruel activities with exotic animals, such as the Greater Wynnewood Exotic Animal Park and the Institute for Greatly Endangered and Rare Species, both have been investigated by the Humane Society of the United States for extensive cub-petting practices with tiger cubs separated from their mothers at birth to be sold throughout the country and for housing adult tigers and exotic animals in small cages or horse stalls with cement floors (The Humane Society of the United States, 2020). While all of these zoos are licensed by the USDA for animal exhibiting and subject to the same government regulations, it seems clear that they are extremely different from one another as some prioritize animal welfare and conservation while others, especially roadside zoos, prioritize profits over animal care. These zoos prompted my investigation into the US animal welfare standards and licensing policies, as I began to question how facilities such as the North Carolina Zoo and the Greater Wynnewood Exotic Animal Park could both be considered zoos and both be licensed by the US government.

The purpose of this research is to clearly understand the different acts, laws, federal agencies, and private organizations that govern zoos in the US and the ways that they each impact animal care. This thesis will evaluate the strengths and weaknesses of the Animal Welfare Act (AWA), which is the only federal law that establishes care standards for exotic animals in zoos, and the ways in which the USDA and its coordinating agencies go about enforcing the standards laid out in the act. Another goal of this research is to understand and

evaluate the key differences between the federal government's licensing standards and the zoo accreditation process and care standards of private organizations. In order to accomplish these goals, my research includes an extensive comparative analysis of the USDA's, the AZA's, and the Zoological Association of America's (ZAA) licensing requirements, inspection protocols, and care standards. Additionally, I conducted interviews with zoo staff members from across the country to gain their perspectives on how animal welfare policies on paper translate into practice within zoos themselves in order to make effective policy recommendations.

To start this thesis, I will define specific terms that will be used and discussed throughout this thesis along with important policies that impact zoos. Next, I will evaluate the current literature surrounding this topic that will cover both the care standards for zoos and the level of oversight and enforcement of those standards to understand where gaps exist or problems arise. From there, my research and findings will be discussed as I conducted both a comparative analysis of certain policies and guidelines between the USDA, AZA, and ZAA, and additionally, I conducted semi-structured interviews with zoo staff to gain a better understanding of how policies written on paper translate into daily practice within the zoos themselves. Lastly, I will discuss how my research findings build upon and in some cases challenge the surrounding literature over this topic to effectively make policy recommendations to increase both the care standards for exotic animals and the level of oversight and enforcement in zoos.

Overall, I believe that zoos have the ability to positively affect people's opinions on wildlife and environmental conservation and on what quality animal welfare should look like. Therefore, by establishing both clearer and higher standards and enforcement guidelines, the public can trust and ensure that all licensed wildlife exhibitors in the US give their animals

proper care and that their facility's goals are refocused away from extreme profits at the suffering of vulnerable creatures.

Chapter 2: Background

Due to the longstanding presence of zoos in the US, the definitions and policies surrounding them have both grown and changed over time. This section is meant to clarify specific definitions that my thesis will be working from and point out certain limitations or shortcomings within them. Additionally, the current policies and laws that impact exotic animals and zoos will be explained in order to reference certain recent changes or issues concerning them later on.

Definitions

Before diving into the policies surrounding the topic of zoos in the US, it is important to clarify certain definitions, as many will be referenced and in some cases critiqued in different sections of this thesis. The key terms include: zoo, roadside zoo, sanctuary or refuge, and licensing and accreditation in relation to US zoo facilities.

First, the most important, and simultaneously most ambiguous, term to define is zoo. The full name for zoos is a zoological garden, but in this thesis I will simply refer to them as zoos. To limit the scope of my research, I will focus only on zoos and specific animals within the zoos. This thesis will only cover zoos, not aquariums or marine animal facilities, simply because the AWA does not include cold-blooded animals at this moment. This thesis will also focus on exotic animals specifically, which the USDA defines as animals "which are native to a foreign country or of foreign origin or character, is not native to the United States, or was introduced from abroad," (U. S. Food and Drug Administration, 2019, pg. 31), and animals considered wild

in the US that are kept within zoos as this research believes that these two categories of animals have received minimal attention in formal government documentation surrounding their care.

Today there are a multitude of definitions of a zoo, in many ways due to the fact that over time zoological facilities and public expectations of zoos have changed, and the precise definition has sometimes been tied to the organization that is running or working with the facility and what they hope to achieve. Additionally, zoos in the US come in all different sizes (facility size and number of staff and animals), are in different locations with different environmental features, and contain their own makeup of animal species; in sum, no two zoos are exactly the same, so developing a specific definition and deciding which facilities truly fit the definition are difficult. This ambiguity will prompt my policy recommendations later on the need for developing specific criteria for the definition of a zoo.

Merriam-Webster defines a zoo as "a place where many kinds of animals are kept so that people can see them" (n.d.). This definition leaves room for interpretation and ambiguity as it does not define what type of place the animals are located in or what type of animals are kept there. It seems to be the most basic definition for a zoo. On the other hand, the Association of Zoos and Aquariums (AZA), which is a zoo accreditation agency in the US that will be described in detail later, defines a zoo as "a permanent institution which owns and maintains wildlife, under the direction of a professional staff, provides its animals with appropriate care and exhibits them in an aesthetic manner to the public on a regularly scheduled, predictable basis" (2018). This more specific definition demonstrates the AZA's expectations that only "professional staff" can run zoos and provide care and aesthetic presentation of their animals, and in many ways specifically exclude zoos that are negligent or do not in their view properly care for animals.

There are many other definitions of a zoo, but due to the fact that this thesis focuses heavily on the standards and enforcement policies of the United States Department of Agriculture (USDA), I will use their definition of a zoo. They define a zoo as "any park, building, cage, enclosure, or other structure or premises in which a live animal or animals are kept for public exhibition or viewing, regardless of compensation" (Animal and Plant Health Inspection Service, 2019, p.32). Although this thesis will use the USDA's definition, it also will challenge this definition in order to create clarity and defined expectations for all zoos across the country by evaluating competing definitions and scholarly perspectives.

While the definition of a zoo itself contains different standards and details, a new term to describe certain zoos has become popular: roadside zoo. The term has been used by certain animal welfare agencies to point to zoos that do not provide an acceptable level of animal care. Turpentine Creek Wildlife Refuge (2020) argues that roadside zoos are often solely motivated by profits, often run by inexperienced staff, have poor living conditions for their animals, and often play a major role in poor wildlife breeding practices and wildlife trade. The Animal Legal Defense Fund (n.d.) states,

> The animals frequently live in small, dirty cages. They are fed inadequate food, and are denied medical care. They have little in the way of mental stimulation — often, not even the company of other animals, since many roadside zoos keep animals confined alone in their cages. Sometimes roadside zoos also encourage dangerous interactions between animals and visitors, such as bottle feeding tiger cubs.

In some cases, people separate the problems of zoos generally from these low standard "roadside zoos," as the latter face strong public criticism while the former do not. However since these facilities are licensed by the USDA and held to USDA standards of zoos, I will keep

roadside zoos within the scope of zoos in general. Critics point to this issue of outdated care standards as the reason these types of zoos exist, thus, this thesis will reference roadside zoos throughout its analysis of US licensed zoos.

Oftentimes reports on zoos use labels such as animal sanctuaries or refuges. This paper makes a clear distinction between zoos and exotic animal sanctuaries. The Global Federation of Animal Sanctuaries (GFAS) (n.d.), the official sanctuary accreditation agency, defines a sanctuary as "any facility providing temporary or permanent safe haven to animals in need while meeting the principles of true sanctuaries: providing excellent and humane care for their animals in a non-exploitative environment…" True animal sanctuaries are nonprofit organizations that can choose to become accredited by the GFAS and can choose whether or not to display their animals to the public, but if a sanctuary is open to the public it must be licensed by the USDA. Additionally, unlike zoos, sanctuaries do not buy, sell, breed, or trade animals. They exist solely for surrendered or confiscated animals to have a safe forever home if they cannot return to the wild. Sanctuaries play a critical role in housing exotic animals from zoos that are shut down by the USDA, and they point to the growing number of exotic animals living in bad conditions across the US.

Finally, the terms license and accreditation need to be defined in regards to zoos because the distinction between the two is meaningful. To exhibit exotic animals in zoos in the US, an exhibitor must apply to have a license from the USDA (under the USDA licensing rules, zoos fall under Class-C for animal exhibitors). In the USDA's *Licensing and Registration Under the Animal Welfare Act,* it states under zoological parks:

> Animal exhibits open to the public must be licensed whether they are owned by states, counties, or other local governments; corporations; foundations; or private individuals.

Zoos run by agencies of the federal government are not licensed, but the animals in these zoos are inspected and are subject to these same USDA standards of animal care (pg. 14). Certain zoological facilities do not have to receive a license from the USDA. For example, reptile houses are exempt due to the fact that only warm-blooded animals are covered by the Animal Welfare Act (AWA) (U. S. Food and Drug Administration, 2019, pg. 16).

Zoos are also subject to certain licensing laws depending on their states' regulations, which will be discussed in more detail later. While all zoos in the US must be licensed by the USDA and although some zoos are subject to additional regulations from state and local governments, there is a more selective regulatory process for which zoos can choose to apply: accreditation by either the Association of Zoos & Aquariums (AZA) or the Zoological Association of America (ZAA). Roughly 10%, or around 235, of USDA licensed zoos also have an AZA accreditation, and only around 60 zoos have a ZAA accreditation (Burba, 2018). So, licensing refers to the USDA licensing policies, while accreditation refers to non-governmental agencies' regulations and guidelines.

Policy

Before understanding where issues arise within zoo care standards, licensing procedures, and enforcement of regulations, it is critical to understand the agencies and policies involved with zoos. The governing agencies and policies over zoos in the US are extensive as they include legal acts, a multitude of agencies, private organizations, and state policies. At the federal level, the Animal Welfare Act (AWA), the Endangered Species Act (ESA), and the Lacey Act govern the care, management, and transport of zoo animals. As the first federal law protecting the welfare of animals in commerce, exhibition, teaching, testing, and research, the Animal Welfare Act of 1966 remains the primary act protecting zoo animals (Adams and Larson,

n.d.). The original 1966 AWA was enacted to "set minimum standards for the handling, sale, and transport of cats, dogs, nonhuman primates, rabbits, hamsters, and guinea pigs held by animal dealers or pre-research in laboratories" mainly in response to public outcry concerning the housing and care standards for laboratory animals and dogs and cats held by animal dealers. It was not until 1985 that the Improved Standards for Laboratory Animals Act was added into the 1985 Farm Bill, which "provided major changes regarding the scope and breadth of USDA's jurisdiction over animal welfare in the laboratory, testing of animals, animals used in higher education (e.g. not food or fiber related courses), animals on exhibit and captive marine mammals." This amendment is how zoo animals were fit into protection (Adams and Larson, n.d.).

Two other federal acts that are important to zoos in the US are the Endangered Species Act (ESA) and the Lacey Act. The ESA was signed by President Nixon in 1973 to protect wildlife and their habitats for the sake of biodiversity (Grech, 2004). The ESA's protective measures only extend to species listed in Section 4 of the Act as "threatened" or "endangered," therefore, this act only comes into play with zoos that have these species in their facilities (Grech, 2004). It is important to note that the ESA does not regulate possession of endangered species, nor the welfare of those possessed; rather, it regulates only the movement of these species within the US (Grech, 2004). Additionally, scholar Emily Jenks (2019) points out that the ESA's main purpose is species preservation rather than cruelty prevention. The ESA has what is called the "take" prohibition, in which "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (U.S. Department of Commerce, n.d.) So, if a species is listed as endangered or threatened a "take" prohibition is extended to it, meaning an individual cannot do any of the listed actions. However,

as long as exhibitors meet the minimum care standards of the AWA they are not violating the "take" provision, even if some practices could be classified as animal cruelty or neglect (Rohlf, 2014).

Next, the Lacey Act makes it a crime to engage with wildlife taken, transported, or sold in any manner that violates any state, national, or foreign law (Grech, 2004). The Act is meant to "prohibit the general trade of endangered wildlife and attempts to keep illegally obtained animals and animal products out of trade" (Maxwell, 2011, pg. 32). This Act, which was passed in 1990 and amended in 2008, does not apply to persons licensed or registered and inspected by the Animal and Plant Health Inspection Service or any other Federal agency or wildlife sanctuary, thus exempting practically all zoos containing animals regulated under the AWA (Grech, 2004). Although the Lacey Act does not directly deal with zoo animals in all instances, some zoos engage in unlawful animal trading and certain breeding practices that should fall under it, indirectly.

There are numerous government agencies that enforce the provisions in the AWA, ESA, and Lacey Act. The main authority regarding the AWA is the Secretary of Agriculture within the United States Department of Agriculture, while the Office of Management and Budget (OMB) oversees the USDA (Jenks, 2019). The OMB serves the President and is directly responsible for, among other things, "management, including oversight of agency performance, procurement, financial management, and information technology" and "coordination and review of all significant Federal regulations from executive agencies, privacy policy, information policy, and review and assessment of information collection requests" (The White House, 2021). Within the USDA, the Animal and Plant Health Inspection Service (APHIS) has the power to enforce the standards set forth by the AWA and manage licensing regulations (Maxwell, 2011).

APHIS is directly responsible for inspecting all licensed zoos to ensure compliance with AWA regulations. APHIS is divided into two divisions: Animal Care and Veterinary Services (Grech, 2004). The Animal Care branch directly deals with the welfare enforcement of APHIS, while the Veterinary Services branch is connected to the National Center for Import and Export that regulates the import and export of zoo animals (Grech, 2004). When standards from the Animal Care and Veterinary Services are not met, the Investigative and Enforcement Services (IES), under APHIS, functions as the investigative, enforcement, and regulatory support service to the Animal Care and Veterinary Services divisions. Lastly, both the ESA and Lacey Act are under the jurisdiction of the Departments of the Interior, although the Lacey Act also falls under the USDA (Grech, 2004).

In addition to federal policies, exhibitors in the US are subject to their jurisdictions' local ordinances as well as state laws. Due to the extensive patchwork-nature of local and state laws, exhibitors in different jurisdictions are subject to vastly different standards (Jenks, 2019). However, most every state has enacted stricter policies regarding animal cruelty than what the federal government sets in the AWA, with forty-one states and the District of Columbia having felony-level penalties for certain types of cruelty violations (Grech, 2004). Still, other states, such as Mississippi, Missouri, and Nebraska, have exempted zoo animals or “exhibition animals" from their anti-cruelty provisions, which means they receive no specific protections from the state (Grech, 2004). California has some of the strictest anti-cruelty laws, as they apply to “every dumb creature,” and in 2018, Ilinois was ranked number one in animal protection laws by the Animal Legal Defense Fund (Animal Legal Defense Fund, 2019). Recently, Louisiana passed LA HB 1621, which makes it a Class 4 violation to kill a current or former zoo or circus animal for sport (Grech, 2004). The law prohibits zoos and circuses from providing, selling or donating

any animal for use in a canned hunt, where hunters pay a fee to kill captive, tame animals (Grech, 2004).

Across the US, some states prohibit the possession of wild or exotic animals completely, while many simply choose to restrict possession to certain species (Schaffer, 2021). Additionally, most states will have either a permit, license, or registration requirement to possess certain animals (Schaffer, 2021). California is one of the few states that since 1985 has required exhibitors, breeders for exhibition or breeding in general, certified zoos, researchers, brokers and dealers, and shelters and sanctuaries to get a permit from the California Department of Fish and Game and are subject to inspections (Maxwell, 2011). In sum, states and local laws vary in their wildlife permit and licensing requirements, and typically local areas have stricter policies regarding exotic animals mainly in response to public safety or health concerns (Maxwell, 2011). Due to the varied nature of state and local laws, I only offer policy recommendations for the federal government to enact.

Finally, a brief introduction into the two non-profit zoo accreditation agencies over US zoos is needed. The Association of Zoos and Aquariums (AZA) was started in 1924, while the Zoological Association of America (ZAA) is a comparatively new organization started in 2005. The ZAA was formed through the merger of two pre-existing organizations, the International Society of Zooculturists and the United Zoological Association, that believed the AZA was not working well-enough, specifically in regards to trading and breeding policies (Garner, 2016). Both the AZA and the ZAA require interested zoo facilities to complete an application process and pay a fee to be accredited. All member zoos are subject to inspections by either the ZAA Board and AZA Accreditation Commission. Accredited zoos are held to the care standards of all US laws and additional regulations of their accrediting agency, and some of the zoos are able to

engage in more intensive conservation efforts and breeding programs (Garner, 2016).While there is some debate over the relative merits of the ZAA and AZA, many scholars point to these private organizations as the leaders in upholding animal welfare in zoos, having a more impactful role in what their zoos do than the USDA. This research, that I explore in the next chapter, evaluates the differences between the AZA and the ZAA and their differences with the USDA's licensing procedures and care standards.

Chapter 3: Literature Review

To begin answering my research question, which is "how can the US improve welfare standards to create clear and improved animal care guidelines for licensed zoos, and how can the US increase its enforcement of standards in zoo licensing and inspection requirements to tighten oversight of these organizations?" and to place my research in conversation with other scholarly works, I conducted a review of the related literature. This literature review is split into two sections: 1) standards and 2) oversight and enforcement. These categories allow me to effectively understand the various perspectives of other scholars on these separate yet interconnected issues.

Care Standards

The discussion of care standards for zoo animals is a multifaceted conversation and one with a long history of differing opinions. To start, it is important to take a closer look at the current views on what constitutes good care standards and the limitations that scholars have identified in meeting those standards. Therefore, through this section of the literature review, I will address current scholars' opinions of zoos today in terms of care and quality expectations, then what scholars see as problems arising from current expectations, and finally where scholars believe zoo care standards can go in the future.

First, the current literature presents a multitude of debates and perspectives that in some cases describe how zoos currently exist and their shortcomings, and in other cases describe the role all zoos should play in our society and 21st century expectations of their care standards. Through her student research at DePauw University, Lilly Burba (2018) states that modern zoos should have a multitude of new purposes beyond simple entertainment for the public. She claims

that today's zoos more often than not provide educational programs for their visitors, engage in conservation projects, continuously provide and improve veterinary care, and provide enrichment services to keep animals' minds and bodies healthy (Burba, 2018). "Enrichment service" covers anything added to animals' "enclosure to stimulate their senses and encourage them to engage in different activities" (Burba, 2018, p. 42-43). Jennifer Gray (2015) writes "a well-run, modern zoo is a zoo that uses the best available knowledge and technology to make evidence-based decisions, listens to public sentiment and is committed to animals, as individuals and as species. Well run zoos inform public views, leading the expansion of knowledge of animals and the environment and at all times demonstrating a respectful way of treating animals, people and the environment" (p. 51). Rachel Garner (2016) addresses the shift in zoo management and welfare standards that zoos have made in the 21st century in terms of enrichment stating,

> Zoo animals worldwide used to be considered nothing more than living dioramas, and while their physical needs were tended to in order to keep them alive, very little was done to take care of their mental health… Luckily for everyone, the field of zoo animal management has moved forward from that era. As a field, it's been acknowledged that there is a responsibility to provide the best possible welfare for animals that have had artificial limitations imposed upon them, which includes making sure they stay mentally engaged and behaviorally fulfilled.

Additionally, Maxwell (2011) points to the fact that most zoos today work to create a balance between gaining a profit and maintaining conservation goals. Similarly, the president of the Association of Zoos and Aquariums states that zoos should lead the way in engaging in endangered species recovery and reintroduction, which goes into why the AZA requires all their

organizations to have a financial and educational commitment to conservation (Association of Zoos and Aquariums, 2018).

The changing role of zoos in society and the way animals are expected to be treated within zoos comes through changing ethical considerations for animals and the environment in the last few decades. In 1999 the World Association of Zoos and Aquariums established the official Code of Ethics and Animal Welfare. It states, "The continued existence of zoological parks and aquariums depends upon recognition that our profession is based on respect for the dignity of the animals in our care, the people we serve and other members of the international zoo profession" (WAZA, 2003). The entire document focuses on the ideals of conservation, respect for all animals, and achieving the highest level of animal care and welfare. Gray (2015) addresses different ethical considerations when evaluating zoos. She argues that "increasing threats to wild populations, public pressure to justify captivity and shifts in attitudes, have resulted in modern zoos adding research and conservation outcomes to their traditional benefits of recreation and entertainment" (p. 3). Gray (2015) believes that modern zoos are "ethically defensible when they align conservation outcomes with the interests of individual animals and the interests of zoo operations" (p. 3).

In addition to the direct changes in expectations for animal care within zoos in the 21st century, zoos have also become a part of US society and impact people's lives, which means that zoos have a substantial impact on how large portions of people view animal care and welfare. As noted earlier, Tribe (2004) found that roughly 90% of Americans have visited a zoo within their lifetime and 92% of visitors do so as part of a group. One of the biggest impacts of zoos is on early education and increasing connection to exotic animals and nature. Oxarart, Monroe, and Plate (2013) conducted a study at the Brevard Zoo in Florida where they found the zoo

contributed to increased family time spent outdoors and more engagement from children in an educational setting. McMickle and Stuart (2020) discuss the Will Smith Zoo School, a part of the San Antonio Zoo that has over 200 preschool students, writing that "a nature-based preschool at a zoo provides [students] with knowledge of native wildlife and community cultures balanced with knowledge of unique animals and cultures from around the world." These studies show that zoos play a large role in many people's lives and the expectations of modern zoos are varied and high. Further, these studies provide a foundation for my research evaluating whether and how well AWA and USDA promulgate and enforce these high and varied standards and goals.

While it is clear that there are new expectations of zoos and animal care, many scholars argue that the laws governing zoos, like the AWA, do not hold zoos to these expectations. Just from the USDA's definition of a zoo, many critics, such as the AZA, see the USDA falling short in working to ensure that modern expectations of animal interest are at the forefront. As noted earlier, the definition of a zoo according to the USDA basically states it is anywhere that an animal is kept for viewing, whereas the AZA's definition points to where animals are kept, who watches over them, and a commitment to care (Association of Zoos and Aquariums, 2018). The definition alone from the AZA refocuses the modern expectations of what a zoo should be to achieve goals, not simply that wild animals are presented to the public (Burba, 2018).

In addition to the outdated definition of a zoo, many scholars have an issue with the AWA's title and definition of an animal. Justin Marceau (2018) in his legal research paper "How the Animal Welfare Act Harms Animals," points out that some non-profit animal protection organizations have moved resources away from certain forms of animal protection litigation and advocacy in order to "educate the public that despite the fact that these facilities are operating under the auspices of an official USDA AWA 'license,' the animals may not actually be well-

treated" (p. 119). He strongly believes that the public is entirely misled by the title of the Animal Welfare Act as it "has the perverse effect of providing the public with a false confidence that animal welfare is being rigorously overseen by the federal government" (Marceau, 2018, p. 119). Additionally, Stanley (1998) claims that the AWA should instead be called the "Animal Users' Welfare Act" as he believes it does more to protect those who are licensed than protecting the animals in their care (p. 104).

Regarding the definition of animal in the AWA, Marceau (2018) finds it severely outdated and not all encompassing. Within the AWA, the USDA (Animal and Plant Health Inspection Service, 2019, p. 6) defines an animal as,

> any live or dead dog, cat, monkey (nonhuman primate mammal), guinea pig, hamster, rabbit, or such other warm-blooded animal, as the Secretary may determine is being used, or is intended for use, for research, testing, experimentation, or exhibition purposes, or as a pet; but such term excludes (1) birds, rats of the genus Rattus, and mice of the genus Mus, bred for use in research, (2) horses not used for research purposes, and (3) other farm animals such as, but not limited to livestock or poultry, used or intended for use as food or fiber…

Marceau (2018) writes, "so, the AWA offers no protection to farm animals, although it applies to dead dogs. It does not apply to any cold-blooded animals, but applies to all warm-blooded pets. A pig used for research is covered, but his sister in a pork-processing plant is not" (Marceau, 2018, p. 118). So, it is important to understand initially that the terminology creates spaces for ambiguity, interpretation, and lack of all-encompassing protection.

Even more important problems arise from the AWA's care standards. First, it is important to note that the AWA is responsible for protecting exhibited animals, like zoo animals,

in three ways: “while they are on or held for exhibition, while they are being transported for exhibition, and while they are being sold among exhibitors and other entities regulated by the AWA” (Stanley, 1998, p. 104). Stanley (1998) in a positive note to the AWA argues that without the act there would be entirely no federal protection for these animals, which is why he argues that it is crucial to closely evaluate the AWA for improvements. In general, there have been very few amendments made to the AWA for the protection of zoo animals and the improvement of their care. For example, in 1985, there were amendments made for psychological enrichments for animals used for research specifically, but (except for nonhuman primates) no such amendments have been made for enrichments for zoo animals (National Anti-Vivisection Society, 2021).

Many scholars are quick to address the minimal and non-species specific standards outlined in the AWA. Jenks (2019) notes, “most exotic animals are categorized in the same subsection in the regulatory framework rather than individually by species. Thus, the same regulations that apply to elephants apply to tigers, kangaroos, zebras, camels, and other similar animals” (p. 1096). Further, scholars believe that the standards themselves are minimal at best. For example, the AWA simply requires that enclosures allow an animal enough room to stand up and turn around (Animal and Plant Health Inspection Service, 2019, p.232). Facilities are not required to make potable water available to their animals at all times, and feces only need to be cleaned often enough to prevent contamination or disease (Jenk, 2019, p.1095). Also, these standards are ambiguous. Zoo animals are to be kept so as to ensure their well-being or that they are given adequate or sufficient care, but “well-being” is not defined; it is open to interpretation and different for each animal (Grech, 2004). So, a simple evaluation of the vocabulary and standards of the USDA and AWA demonstrates their many shortcomings.

When it comes to implementation of animal care standards, given the fact that the AWA simply sets the minimum, some zoos go above and beyond while others barely meet the minimum requirements. In many cases, zoos that are accredited by the AZA or ZAA must hold themselves to separate care standards outside of the AWA. Jodidio (2020) notes that both accreditation agencies have much more specific and strict animal welfare standards, for example "nutrition, comfortable living, physical health, natural coping skills to mimic the wild, chronic stress avoidance, and quality space and social grouping, as appropriate" (p. 62). The AZA also has a no public contact policy with tigers and follows strict breeding guidelines through their Species Survival Plans (Jodidio, 2020). While it is widely agreed that the accreditation organizations are more committed to animal care, scholars also note the differences between the AZA and ZAA. Jodidio (2020) states that unlike the AZA, the ZAA has accredited a number of low quality roadside zoos that have contributed to bad animal trading policies and allowed cub-petting practices. In some cases, neither agency satisfies critics' problems with zoos' care standards and conflicts of interests with animal care. As Palmer (2011) states, "critics point out that the organization's standards are developed and approved by members of the zoo community. Moreover, they believe the standards are set not by the needs of the animals but by what the top zoos are realistically capable of providing. If no zoo could achieve accreditation, after all, the standards would become rather meaningless. In their view, accreditation is more an assurance of non-awfulness than a mark of excellence." Many argue against the level of care standards within the AWA, but there are also some who argue against the private accreditation agencies.

The wide gaps in care standards between the AWA and AZA or ZAA means zoos across the country can look very different. This can create confusion for Americans visiting zoos to truly understand when a zoo is demonstrating good animal care practices. Marceau (2018)

addresses this large gap and how the AWA itself contributes to it. “In a very practical sense, persons in the business of exhibiting animals rely on the existence of the AWA to prop up their business. If one looks at the pictures of tigers in metal cages with concrete floors, or other animals living in unfortunate conditions, as in the case at many of these facilities, it is difficult to imagine that the zookeepers would support a repeal of the AWA, the very law that lends federal credibility to their operation” (Marceau, 2018, p. 124). So, certain zoos are able to use the AWA and the USDA’s license approval as an excuse to continue poor care.

All across the country, some licensed zoos, often labeled roadside zoos, have been featured in news stories for their lack of animal welfare standards: many have contributed to harmful exotic pet trading industries, and provided poor living and health conditions for the exotic animals themselves. For example, the Collins Zoo in Mississippi was shut down after a two year undercover operation showed terrible living conditions (WDAM7, 2012) and the Netflix series Tiger King showed the world just how much harm these places do to exotic animals (Laurie, 2020).

First, most roadside zoos are severely underfunded, but simultaneously are more worried about the bottom line and how much money they can gain; thus, animal care and animal expenses are the first to be overlooked in weighing where profits should go (Humane Decisions, 2020). The owners basically exploit the exotic animals for profit, often luring customers into their facility by offering close-up and hands-on encounters (Jenks, 2019). Additionally, in many cases, these zoos are run by employees with no training or limited knowledge about the animals in their care, resulting in inadequate living conditions (Smith, 2020). There is rarely, if any, enrichment for the animals, and as Jacquet (2016) writes, “While conventional zoos have moved to enclosures for animals for at least part of the day, animals at some roadside zoos can spend

their entire lives in a cage." This has led to an overwhelming amount of "zoochosis" with the animals suffering from extreme boredom resorting to instances of self-harm (Humane Decisions, 2020).

Additionally, there is an overall lack of veterinary care and attention to animal health in these zoos, leading to higher illness and mortality rates (Smith, 2020). The problems seem to be very well-known as the Animal Legal Defense Fund created a "roadside zoo" checklist that encourages visitors to pay attention to animal welfare, especially endangered species and primates, as well as the staff, veterinary care, and animals' housing (Animal Legal Defense Fund, 2019b). More often than not these roadside zoos are able to evade USDA regulations and rarely are they shut down without years of animal suffering beforehand (Jenks, 2019).

Another major issue within some roadside zoos is cub-petting: using baby animals, more often than not baby tigers, for photo-ops and interactions with paying customers (The WildCat Sanctuary, 2017). What many do not realize is that cub-petting feeds into the abuse, trade of, and sometimes death of exotic animals. Specifically focusing on tigers, in the wild most female tigers have a litter of cubs once every three years and stay with them for at least two years. Instead, "speed breeding" forces female tigers to produce up to three litters in one year to ensure a constant supply of cubs, who are immediately taken away from their mother harming them emotionally and physically (The WildCat Sanctuary, 2017). Then the cubs suffer further as they are constantly passed among strangers and do not receive proper emotional or nutritional care. This makes them very susceptible to disease, such as Canine Distemper Virus (CDV) (The WildCat Sanctuary, 2017). Further, as the Animal Welfare Institute (n.d.) explains, "after they outgrow their usefulness and profitability at about 12 weeks old, these cubs are funneled into the exotic pet trade, sold to another disreputable exhibitor, or killed to supply the black market trade

for wildlife parts." Kitty Block, President and CEO of the Humane Society of the United States, states that going to roadside zoos fuels the cub petting industry and inhumane treatment of tigers (Bloch, 2020). She argues, "breeding tigers is only ok for accredited zoos that are part of Species Survival Plans, which is a conservation program designed to manage the genetic diversity and demographic distribution of a population to ensure its health in the wild" (Bloch, 2020).

Many argue that this problem is why the ever growing number of legitimate sanctuaries exist for exotic animals. For example, places like the Turpentine Creek Wildlife Sanctuary are responsible for rescuing exotic animals from poor living conditions, either from private individuals or zoos, often when a zoo is shut down by the USDA for violations (Turpentine Creek Wildlife Refuge, 2020). However, while the AWA is supposed to focus on maintaining good animal welfare standards, its focus on regulation instead of welfare overlooks many offending zoos. Although the second section of this literature review will cover oversight of the AWA in more detail, Marceau (2018) argues that the zoos with the most problems and ones with obvious lack of animal welfare more often than not cite in their defense their compliance with the AWA's and the standards laid out there.

These problems have driven scholars to propose different solutions to raise animal welfare standards. One option is to require all zoos to be accredited through the AZA as a way to improve care standards, ensure all zoos focus on conservation and species care and protection, and stop failing zoos from continuing (Lamont, 2015). However, Hickel (2015), through a cost-benefit analysis of zoo accreditation, concludes that zoos do not have to be accredited to achieve high care standards, but rather accreditation by the AZA and the ZAA mainly just builds zoos' resources and connections and provides strong name recognition. Another option is to move away from the concept of zoos altogether and instead become sanctuaries. Sanctuaries claim to

put the animals' welfare above all else, including profit; thus, if we as a society truly care about animal welfare we should move away from zoos and toward sanctuaries (Marino, 2016). Neither of these options necessarily work to achieve my goal of fixing the USDA's care standards.

Recently, there have been moves within the US government and by outside advocates for major changes to the AWA, with more focused welfare standards and more stringent care regulations. Jenks (2019) makes the case that drastic changes to improve zoos and animal care must come from the federal government as their standards and regulations hold sway over every exhibitor in the country. Jodidio (2020) argues that the AWA should expand its animal coverage and include species specific guidelines to establish clearer regulations and help inspectors make better informed decisions, and she believes that the AWA should prohibit public contact with animals (Jodidio, 2020). Recently, prohibiting public contact with certain exotic animals has gained momentum within the US Congress, especially since the show *Tiger King* displayed the horrors of the cub petting industry.

HR 263, more commonly known as the Big Cat Public Safety Act, is a bipartisan bill that passed the House in 2020. It works to address the growing number of privately owned and traded big cats across the US and the cub petting industry that have major implications for public safety, animal welfare, and animal conservation efforts (Animal Welfare Institute, n.d.). Animal Wellness Action, Big Cat Rescue, the Animal Wellness Foundation, the Center for a Humane Economy, and SPCA International were among the major groups that advocated for the bill to be passed by Congress (Animal Wellness Action, 2020). Specifically, the bill "amends the Lacey Act Amendments of 1981 to prohibit any person from breeding or possessing prohibited wildlife species (i.e., any live species of lion, tiger, leopard, cheetah, jaguar, or cougar or any hybrid of

such species)" (Congress.gov, 2017). This bill is a big first step to establishing legal precedent for better animal welfare and animal treatment practices within zoos.

Finally, there are some who believe that the way in which zoo officials and policymakers view animal welfare must be changed in order to improve animal care practices and standards. Melfi (2009) believes that there are gaps in the way policymakers and zoo management understand animal welfare, which he sums up in three major arguments: that "there is an emphasis on the identification and monitoring of indicators that represent poor welfare and it is assumed that an absence of poor welfare equates to good welfare," that "our understanding of how housing and husbandry (H&H) affects animals is limited to a small set of variables determined mostly by our anthropogenic sensitivities. Thus, we place more value on captive environmental variables like space and companionship, ignoring other factors that may have a greater impact on welfare, like climate," and lastly, that our focus on animal welfare improvements are limited to a few animal groups. He argues that all of these issues have caused zoos to take an approach for animal care that is stagnant and misinformed; therefore, he advocates for the adoption of an evidence-based zoo animal management framework that turns attention away from minimum standards for survival to positive welfare for animals to thrive (Melfi, 2009). This is an important option, because it encourages a refocus within the AWA itself from certain standard care inputs or attention to specific details to new and additional measures that would help shape how zoos administrators, policymakers, and inspectors understand what animal care should truly looks like.

Similarly, the Detroit Zoological Society's (DZS) Center for Zoo Animal Welfare (CZAW), which was established to advance the science and welfare policies of captive exotic animals, developed a "Universal Animal Welfare Framework for Zoos" that also points to

changing the way policymakers and zoos should achieve great animal care. Kagan, Carter, and Allard (2015) worked with multiple individuals and zoo organizations on "developing policies, practices, and procedures that reflect a fundamental focus on the welfare of individual animals" and designed a framework with the "core principle of ensuring that animals in zoos thrive, not just survive, physically, psychologically, and socially." The framework is composed of four parts: institutional philosophy and policy, reflecting values, commitment, and capacity building; programmatic structure and resources; execution; and evaluation (Kagan, Carter, & Allard, 2015). One major focus for their research was developing an "animal-centered" approach to showing their environments, relationships, and growth within the zoo itself (Kagan, Carter, & Allard, 2015).

While these solutions are important to consider for zoo animal welfare across the country, scholars have noted that low quality zoos represent the culmination of the failure of the USDA to properly enforce good animal care and highlight the current problems with the existing zoo regulations. This next section will provide a detailed look at how many scholars view the oversight over zoos and the current problems with enforcement.

Oversight and Enforcement

If animal welfare concerns are addressed through policy changes, scholars and policymakers realize that it will mean nothing if the US government does not maintain strong oversight and enforcement. This section of the literature review therefore, will evaluate issues researchers and animal advocates have found within the AWA and the USDA's oversight and enforcement measures.

At a conceptual level the AWA is more than a failure; it is actually part of the animal protection problem. The AWA has come to be celebrated by animal-related industries as

> imposing an exacting standard of federal oversight, but these same operations will then labor under a minimal set of standards that are rarely enforced…The AWA has the effect of locking in a longstanding disregard for animal well-being outside of certain preferred categories, and in the process reassures the public that animal welfare is being looked after by the federal government **(**Marceau, 2018, p. 122).

Marceau's perspective presents this as a failure of governmental oversight.

One of the biggest issues scholars and advocates identify is the disconnect between the federal agencies goals of enforcing the AWA's standards and guidelines and their own agencies' goals within the federal government. In particular, they identify a problem with the Office of Management and Budget (OMB) which has oversight over the USDA and thus the agencies that enforce the AWA. Stanley (1998) argues that the OMB is more focused on protecting industries, including zoos, rather than their animals. She writes, "Their job is not to protect animals. Their business is to know how USDA's actions are going to affect the industries USDA regulates, how the actions affect industry's bottom line, and how they are going to affect dollars and cents" (Stanley, 1998). Additionally, Grech (2004) points out the ideological budgeting conflicts: the OMB has limited resources to give out while the AWA is meant to protect animal welfare no matter what the cost. These concerns will be important to consider further when it comes to feasibility of changes and policy alternatives.

Due to a disconnect between the agencies that enforce the AWA and the actual goals of the AWA there is currently a lack of oversight, funding, regulations, and accountability over zoos. First, Snyder (2009) points out how the delegation of enforcement to several different agencies undermines coordinated enforcement. Then there is the problem of the sheer number of zoos that must be overseen. Currently there are only about 130 Animal Care inspectors to

oversee more than 2,800 exhibitors (Big Cat Rescue et. al., 2012). Jim Maddy, the AZA president in 2014, noted in a House hearing that compared to the AZA, "The U.S. Department of Agriculture inspects 3,000 facilities that display animals for the public to see, and it is not the multiple-personnel, multiple-day kind of inspections" (The National Zoo of Today and Tomorrow, 2014). Lack of funding has constrained the ability of the USDA to effectively handle all the zoos they oversee and ensure fully trained inspectors are kept on staff (Grech, 2004).

Budgetary constraints and accreditation have a large impact on zoo management and, as Burba (2018) explains, zoo budgets depend on who governs the zoo. "When zoos are operated by local governments, their expenses and profits must be factored into the government's budget, which means that the amount of money that is contributed to the zoo can be up for public discussion and debate" (Burba, 2018, p. 39). Additionally, if a zoo is run by the local government, when issues, especially animal welfare issues arise, decisions must go through a public process, which means that policymakers and average citizens with no background on animal care have a large say in decision making (Burba, 2018). On the other hand, some zoos are privately run, often allowing for more autonomy in financial and care decisions for the animals. Lots of times, privately run zoos have the financial capabilities to apply for accreditation with the AZA or ZAA and thus choose to make a commitment to higher care standard requirements, which has costs associated with it (Burba, 2018).

Next, a 2012 petition to the USDA by a multitude of animal welfare groups, including the Humane Society, World Wildlife Fund, and Born Free USA, pointed directly to the ability of zoos to find loopholes and get around certain regulations. Specifically, they pointed to the cub petting contact rule for 8-12 week old cubs: they argue it is very hard to determine this age for different breeds so many inspectors fail to enforce strong consequences for violations (Big Cat

Rescue et al., 2012). Additionally, they note that vague standards can leave room for lax enforcement by inspectors. For example, they point to AWA Section 2.131(d)(3), which states that "during public exhibition" big cats must be "under the direct control and supervision of a knowledgeable and experienced animal handler… with sufficient distance and/or barriers between the animal and the general viewing public" (Big Cat Rescue et al., 2012). This leaves licensees, inspectors, and the public on their own to determine whether a big cat is in fact under a handler's "direct control" and what constitutes "sufficient distance and/or barriers" for an individual big cat.

In terms of accountability, many critics note that the USDA and APHIS do not do enough to ensure that violators of their regulations are stopped from continuing their bad practices (Jodidio, 2020). More often than not, inspectors will simply write up noncompliance violations for zoos and give warnings for improvements before the next inspection; thus, as Jodidio (2020) notes, animals are left to suffer for years as some zoos accumulate multiple citations before being shut down (even then the animals are rarely rehomed, as they are considered the property of the owner). Marceau (2018) summarizes this issue by stating, "In effect… researchers, zoos, and breeders are afforded something akin to a presumption of humaneness because they are licensed by the AWA, and yet the AWA has minimal substantive standards, trivial enforcement efforts, and a formal policy of rubber stamping all license renewal requests" (p. 127).

Scholars and opponents of the USDA's inspection policies often cite the problem of "rubber-stamping" license renewals, especially in facilities with a history of non-compliance with AWA standards (Jodidio, 2020). If a zoo is found in non-compliance, a formal warning is issued with a time frame to address the situation, and if the issue is not resolved an investigation may be opened (Jodidio, 2020). Recently, APHIS instituted the policy of "teachable moments,"

which replaces the warning citation if “it is a minor noncompliance that is not causing discernable pain or distress to an animal, and it does not fall under a section of the Regulations or Standards that is already being cited, and the facility/site is willing and able to correct the issue quickly” (Animal and Plant Health Inspection Service, n.d.). This change could be due to APHIS inspectors' claims that “it is in the interest of animals to work with violators, rather than punish them” (Jodidio, 2020, p. 57). Winders (2018) argues that warnings in general show no evidence of motivating compliance, thus this method, whether or not the warnings and inspections are issued and monitored correctly, fails to truly hold zoo owners accountable.

Overall, the USDA and its enforcement policies are reactive and not preventative. The lack of direct oversight fails to stop big problems from occurring in the first place, and instead the agency comes in to deal with large problems that often result in animals suffering. So, all of these articles and arguments by different scholars point to the need for a major overhaul of the oversight and accountability standards of the USDA.

As with the problems of care standards, numerous scholars have touched on changes that could ensure stronger oversight and enforcement for zoos. Grech (2004) addresses the most pressing need for more APHIS inspectors and more funding to ensure inspections are not overlooked. Regarding the licensing process, Jodidio (2020) and Winters (2018) note that the USDA does not require zoos to demonstrate AWA compliance during the license renewal process, nor does the USDA withhold licensing renewal even with a history of noncompliance. Jodidio (2020) states that “the AWA should be amended to give new licenses only after thorough background checks to make sure prior AWA or animal cruelty violating individuals and businesses are not seeking licenses under a new name. License renewals should not be given to facilities with outstanding violations until they are remedied” (p. 79).

As noted earlier, Winters (2018) believes that warnings fail to stop zoos from committing future violations, and Jodidio (2020) believes that the current monetary penalties for continued noncompliance do not do enough to deter wrongdoing. Both agree there should be stricter penalties for offenders to ensure the cost is higher and more meaningful. As Jodidio writes, "if penalties exceed potential profit, exhibitors will be more motivated to consider the welfare of animals when making their business decisions" (p. 79). Further, Winters (2018) wants to strengthen noncompliance warnings by setting "a clear rubric for escalating penalties when entities that have received warnings continue to violate the law" (p. 494).

Jodidio (2020) also addresses the issue of control over animals from non-compliant zoos. She notes that the USDA currently has no policies for where to take confiscated animals after a zoo is shut down, which she argues lead to hesitancy by inspectors to close noncompliant zoos (Jodidio, 2020). She believes that the AWA needs to require the USDA to create and run a facility for confiscated animals, which will give the USDA more control over the well-being of the animals they take and help increase the number of zoos shut down for noncompliance (Jodidio, 2020).

Finally, Snyder (2009) and Jenks (2019) both suggest new legislative models to add an extra source of animal welfare oversight, but with slightly different frameworks. Snyder (2009) lays out the specifics of new legislation for the protection of all animals, including more inclusive and specific terminology, while Jenks (2019) focuses solely on reshaping legislation for the protection of zoo animals. Both advocate for moving governmental oversight for animal protection from the USDA to the Department of the Interior, specifically to the US Fish and Wildlife Services, as a way to increase enforcement measures. Jenks (2019) justifies this decision by stating, "The USDA's purpose is overseeing agriculture typically in the context of

food. Captive exhibited animals are not agricultural, and their regulation is better suited with the USFWS because its mandate to conserve wildlife is more suited to the regulation of captive exhibited animals" (p. 1126). Snyder (2009) on the other hand advocates for oversight committees under a new Division of Animal Welfare in the DOI to investigate any person, institution, or corporation that hopes to be licensed, with the committee made up of people unaffiliated with the organization and no less than two veterinarians. She believes that this new legislation will ensure "animals in this country exist under decent and humane conditions" (p. 166).

This review of the literature on the care standards and oversight and enforcement of zoos in the US will inform my discussion of my research results and my policy recommendations in order to join the scholarly conversation surrounding the issue of animal welfare in zoos.

Chapter 4: Research Design

The purpose of this research is to understand the current care standards of USDA licensed zoos through the Animal Welfare Act and the extent to which USDA licensing and inspection policies maintain clear oversight and enforcement over zoos across the country. This research is significant because recent news articles, television shows, and documentaries have put zoos and their level of care for exotic animals in a national spotlight. Given that zoos are a large industry in the US, I hope to bring attention to standards and expectations that should be considered outdated or too minimal in order to make recommendations for change. Specifically, I explore not only the USDA care standards and oversight policies, but also those factors in two zoo accreditation organizations, the Association of Zoos and Aquariums and the Zoological Association of America, that also have a large impact on zoos across the country. Through the evaluation of these different organizations and their policies, I then make policy recommendations that the US government could adopt to improve exotic animal care in the country. My formal research question is the following: How can the US improve welfare standards to create clear and improved animal care guidelines for licensed zoos, and how can the US increase its enforcement of standards in zoo licensing and inspection requirements to tighten oversight of these organizations?

Research Protocol

To accomplish the intended goals of this research and effectively answer my research question, I split my research into two parts: a comparative analysis of the formal documentation of the USDA's, AZA's, and ZAA's licensing/accreditation qualifications, their inspection

protocols, and their care standards for zoo animals and the facilities that house them, and then a series of semi-structured interviews with zoo staff from across the US. The goal of both comparing the governing documents of different zoo organizations and engaging with those within zoos themselves is to gain a deeper understanding of how the protocols and standards on paper are achieved or viewed by those responsible for meeting them.

First, I analyze the USDA's, AZA's, and ZAA's licensing/accreditation qualifications, their inspection protocols, and their care standards in order to discover any similarities or major differences. Again, the rationale for choosing the USDA, AZA, and ZAA to analyze was that the USDA is responsible for licensing every zoo in the country, while the AZA and ZAA are the two major competing accreditation agencies, thus the protocols of these three agencies have the most impact on zoo animals in the US. Conducting a comparative analysis allows me to take a deep dive into processes across groups to develop comprehensive conclusions about what might need improvements or changes.

In addition to looking at these three overall elements in detail, each has various subparts that I evaluate as well. Specifically, by looking at the different licensing/accreditation qualifications, in addition to the application process itself, I evaluate the costs involved with the process and how often the process occurs. Next, studying the inspection protocols allows me to understand how often inspections occur, what quality checks or care standards are looked at, how the agencies keep track of inspections, and what occurs if an inspection goes poorly or how the inspectors deal with compliance issues. Finally, looking into the care standards of each organization will be my most intensive comparison. I evaluate the Animal Welfare Act and the USDA's different care guidelines alongside the care manuals and expectations within the AZA and ZAA, and I see how good animal welfare is determined within each agency. Through the

care standards, I look for mission or purpose statements regarding care goals, animal breeding policies, animal contact standards, and veterinary expectations.

The documents I compare are extensive. For the USDA, I primarily evaluate aspects of the Licensing and Registration Under the Animal Welfare Act for Exhibitors document, the USDA's Pre-License Application Package, the Animal Welfare Act and Animal Welfare Regulations Blue Book, the Animal Welfare Inspection Guide, the USDA's Animal Care Public Search Tool (to find instances of Animal Welfare Enforcement Actions and Teachable Moments), Upholding the Animal Welfare Act, and specific Animal Care Aids, all obtained through the USDA's APHIS department website. Through the AZA's website, I look at The Accreditation Standards & Related Policies document, the Guide to Accreditation of Zoological Parks and Aquariums, the Accreditation Process of The Association of Zoos & Aquariums and Animal Welfare, The Inspector's Handbook, and the different Animal Programs and specific Animal Care Manuals. Lastly, through the ZAA's website, I analyze the ZAA Accreditation Standards, Accreditation Application, and Animal Management Programs. Given the many documents listed, I evaluate each document solely for its impact on animal welfare and oversight and enforcement policies to best engage with the literature review presented earlier.

To show the explicit differences between the organizations' standards and expectations, I created charts. For more detailed evaluations, I provide written summaries comparing word choices and notable differences in policies and protocols. It is important to understand differences in wording because the literature shows that wording plays a big role in how people view the quality of care standards or oversight in organizations and agencies.

In addition to the comparative analysis, I conducted interviews of zoo staff from across the country. This provides my research with qualitative data regarding the current state of the

policies and standards within zoo management and the differences they see. I aimed to interview between 10-12 zoo staff members from both USDA license only zoos and zoos with both a USDA license and an accreditation from either the AZA or ZAA. Additionally, I planned to interview staff from zoos of different sizes, both in number of animals and staff members, different financial tiers, and different geographic locations. I planned to gather that information initially from the zoo's website, but other than overall variety, I did not have a particular method for choosing which zoos to contact. I looked at a list of all current USDA licensed zoos for contact information, and searched AZA and ZAA specific zoo lists for ones to contact.

I designed my interviews to be semi-structured, and divided each interview into four sections, with questions based on subject matter. I initially asked questions about the zoos themselves in order to differentiate them based on whether they are small, medium, or large, based on the zoos' number of full-time staff members. Next, I transitioned to care standards within the zoos, focusing on the strengths and weaknesses of the AWA and specific examples of their care standards. The third section covered licensing and inspections procedures directly related to the USDA and its engagement with the zoos. The last section slightly varied between licensed only and accredited zoos. I asked licensed only zoos if they were aware of the AZA and ZAA accreditation agencies, and if their zoo had ever looked into becoming accredited and why or why not. For accredited zoos, I asked what the accreditation process looked like, their opinions about the accreditation process, and why they chose to pursue accreditation. I also asked accredited agencies for their definition of a roadside zoo, which would help me understand their perspective on the issue and compare it with the definition I presented in the background section. Overall, the questions I asked provided additional information and perspectives to both

the straightforward evaluations of different documents I analyzed and the scholars' arguments presented in the literature review.

In terms of the data collection process, I intended the interviews to be approximately 1 hour long and conducted through Zoom, a video conference platform. I used pseudonyms to distinguish the interviewees and maintain their privacy. I submitted my IRB application and received approval to conduct these interviews on August 23, 2021. I contacted zoos through a standardized email with an information sheet to find participants for the interviews. I kept track of whom I recruited in an Excel spreadsheet, along with the dates and platform I utilized to contact them and any responses or follow-up communications I received. I recorded both the audio and video of these interviews, with the consent of the interviewees, and I stored these recordings in my password-protected Panopto account through Zoom. Additionally, during the interview, I utilized a transcribing service, Otter.ai, to generate the interview transcripts to analyze. For those who were unable to interview via Zoom, I interviewed via email. At the end of each zoom meeting, I offered to send the recording to the interviewee and stated that at any point after the interview, the interviewee could reach out to me with issues, questions, or concerns regarding my questions or their answers. I planned to pull quotations from the interviews and create summaries of the similarities and differences among the answers and then organize them into my four categories. My goal with these interviews was to complement and provide nuance to my evaluation of the agencies' documents and how the rules, regulations, and standards actually translate into reality within zoos.

In the next chapter I lay out the results of my research process, explaining what I was able to accomplish and what data I found.

Chapter 5: Comparative Analysis Results

In the end, I achieved most of my research design goals while I had to alter a few others. For my comparative analysis, I was able to analyze all the documents I intended. However, in certain instances I was unable to locate some additional information mentioned on websites or in standard handbooks that would have provided a more in-depth understanding of guidelines or regulations. Specifically, I could not find many of the regulations and guidelines mentioned for the ZAA, and some information for both the ZAA and AZA was only available to organization members.

For my interviews, I was only able to talk with staff members from five zoos instead of the twelve or so I had intended to obtain. Therefore, instead of having my interviews woven into my comparative analysis to provide a narrative element, I have created a separate supplementary interview chapter (Chapter 6).

In this chapter, I examine the processes involved with licensing and accreditation for each organization, then I analyze the different inspection protocols, and finally, I explore the various care standards and expectations between all three organizations.

Licensing/Accreditation Process and Qualifications

The purpose for this section is to understand exactly what the licensing and accreditation process looks like and what qualifications, if any, are required of zoos. First, I look at the USDA and its licensing requirements.

APHIS, through the USDA's website, provides prospective licensees a pre-licensing application package to review and fill out to understand the expectations of a Class-C exhibitor and subsequently apply for a license. In the package, there is a tax identification sheet to complete, and the APHIS Form 7003A Application, which requires information on the type of license the individual or organization is applying for and the number of regulated animals for each category owned, held, or exhibited. Any licensee must obtain a new license and notify Animal Care no fewer than 90 days before making any change to the number or type of animals the zoo exhibits. Through the USDA Animal Care Public Search Tool, a list of persons/organizations licensed or registered under the Animal Welfare Act is available for the public. The USDA's website states that, as of recent 2020 changes that will go into effect in phases, all AWA licensees will receive a 3-year license that will cost $120, whether for a new license or a license renewal.

Once the zoo sends in its pre-license application, the AC division conducts a formal inspection of the zoo to determine that the zoo meets federal standards. According to The Licensing and Registration Under the Animal Welfare Act for Exhibitors document, if a facility does "not meet Federal standards when you apply, you will receive up to three inspections within a period not to exceed 90 days to correct any deficiencies. Licenses are not issued until all deficiencies are corrected. If you do not pass inspection within the 90- day period, you must wait at least 6 months before reapplying for a license."

Recently, in 2020, the USDA created new licensing and re-licensing rules to be phased in over three years (Animal and Plant Health Inspection Service, 2020). The new rules state that to receive a license, applications must "indicate… information demonstrating that applicants have adequate knowledge of and experience with the animals." The form also states that now

APHIS will not issue a license to an applicant that had "violated any Federal, State, or local laws or regulations pertaining to animal cruelty within 3 years of application." Additionally, in an effort to promote compliance, licensees are now required to pass a re-license inspection before a new three-year license is issued. So, before this new licensing rule, any individual that filled out an application and met the requirements of the pre-licensing inspection could receive a license to exhibit exotic animals with no proof they had experience training the animals they are choosing to exhibit.

Next, my research turned to the accreditation process and qualifications under the AZA. The AZA Guide to Accreditation of Zoological Parks and Aquariums (2022) states that "to apply for accreditation, institutions must: (1) operate based on philosophies and practices considered by AZA as being modern best zoological practices of the profession, (2) meet or exceed all AZA accreditation standards and adhere to all AZA policies, and (3) meet all aspects of the definition of a zoological park or aquarium" (p. 16). The application process for a new institution includes steps for completing the application itself, then steps prior to the application submission, upon application submission, during the inspection, following the inspection, at the conclusion of the inspection, and for the accreditation hearing. The AZA recommends that new applicants enroll in the Pathway Towards Membership (PTM) Program, through which the AZA provides support to prospective applicants years in advance of submitting an application. There is no process for re-accreditation, but rather every five years all AZA facilities must complete the entire application process over again. A filing fee and a Visiting Committee deposit are both due at the beginning of the process, and must be included with the application. PTM members and current AZA members pay a filing fee of $3,500 and a $1,500 deposit toward the visiting committee. The filing fee for applicants that do not fall in those two groups ranges from $8,000 to $15,000,

depending on the zoo's annual operating budget (Guide to Accreditation of Zoological Parks and Aquariums, 2022).

The application itself includes a questionnaire roughly 32 pages long, along with other materials such as developed protocols, programs, records, and policies that are in line with AZA standards. It is important to note that the AZA definition of a zoo includes a requirement that it be "under the direction of professional staff," so during the accreditation process, inspectors and the Commission look closely at the zoo's staffing. The Accreditation Standards & Related Policies guide defines professional staff as "a paid full time employee who commands an appropriate body of special knowledge and has the professional training, experience and ability to reach zoological park or aquarium management decisions consonant with the experience of peers, and who has access to and knowledge of the literature of the field" (p. 6). The guide also states that full time staff should have multiple opportunities for training and development to remain up to date on all best practices for animal care and high quality operations (The Accreditation Standards & Related Policies, 2022). Additionally, due to the high costs attached to accreditation, AZA officials carefully evaluate every aspect of a zoo's financial standing to ensure the facility will remain financially stable for years to come and that plans for capital improvements and maintenance can be achieved.

The overall application process can take many months to complete followed by roughly six months for the AZA Accreditation Commission to study and evaluate. The AZA Accreditation Commission is made up of fifteen experts who are "leaders in their fields and have many years of experience and education in zoo and aquarium operations, animal management, and veterinary medicine" (AZA Accreditation Basics, n.d.). The Commission meets twice a year to consider new candidates for accreditation. All commissioners, commission Advisors, AZA

accreditation staff, AZA's general counsel, and the AZA executive vice president hold a final hearing with the CEO/director of the zoo applying for accreditation and ultimately make the final decision to either grant, table, or deny accreditation.

Finally, I evaluated the ZAA accreditation process and qualifications, obtained through the ZAA official website. In order to apply for ZAA membership, an institution must engage in one of the following actions: "exhibits exotic and/or wild animals to the public and has an educational and conservation message," has "educational outreach programs using exotic and/or wild animals," or "propagates exotic/or wild animals for conservation purposes or supplying zoological facilities" (ZAA Accreditation, n.d.). Additionally, a facility must have a professional fellow-level ZAA member, which is someone who is a dues paying member of the ZAA with a "minimum of 5 years full-time paid experience in the zoological industry and serves or has served in a management capacity," and must provide two sponsor letters (ZAA Accreditation, n.d.). Applicants are required to pay a fee of $300 and a $500 onsite inspection deposit, and once the facility is a member they pay annual dues that range from $1,250 to $5,500 depending on their number of year round employees. There are also certain financial standards ZAA members must meet, but the criteria is vague other than stating the facility must provide plans that it can maintain current and future operations for the animals and facility.

The process for accreditation has three steps: first, submitting the application, second receiving a site inspection, and finally an official application review from the accreditation committee. Similar to the AZA policy, there is no process for re-accreditation, but rather every five years all ZAA facilities must complete the entire application process anew. The application itself is a 37 page document that requires accompanying photos and supplemental documents. The application asks for general information about who is filling out the application, what the

applicant's facility does, the types of animals in the facility, number of staff members, amount of money spent annually towards conservation efforts, and general acknowledgment that the facility follows all ZAA standards. Some of the supplemental documents include information on animal enrichment programs, programs of veterinary care, animal contact policies, and USDA inspection reports from the last five years. Some of the photos required are of the public safety barriers, the oldest and newest exhibits, food storage areas, and animal enrichment.

Licensing Items:	USDA	AZA	ZAA
Application/ Filing Fee	$120	PTM/AZA:$3,500 with a $1,500 deposit// NonMembers: $8,000 to $15,000 and $1,500 deposit	Application fee of $300 & $500 onsite inspection deposit
Years Covered by License/Accreditation	License renewal process after 3 years	Official application process every 5 years	Official application process every 5 years
Who Approves the Application	USDA's Animal Care	15 person AZA Accreditation Commission	Accreditation Committee
License/Accreditation Application Components	1 page APHIS FORM 7003A & 1 page Tax ID Sheet	32 page Questionnaire	37 page application
Required Supplemental Documents Submitted With Application	N/A	AZA approved protocols, programs, records	Photos of facility areas & developed protocols, programs, records

Inspection and Enforcement Protocols

Zoo inspections are a major part of whether or not a zoo keeps its license or accreditation, and they are the main way the USDA, AZA, and ZAA hold their zoos accountable to specific rules. Therefore, it is important for this research to compare the inspection protocols.

The USDA explicitly states on its website the inspection and enforcement protocols for all licensed exhibition facilities. Animal Care (AC) personnel are responsible for conducting pre-licensing inspections and unannounced compliance inspections. To determine how many unannounced compliance inspections a zoo receives, AC inspectors utilize something called a risk-based inspection system. This system utilizes “objective criteria, including but not limited to past compliance history” to determine the number of inspections a zoo receives which theoretically allows for “more frequent and in-depth inspections at facilities with a higher risk of

animal welfare concerns, and fewer at those that are consistently in compliance," and for "better use of AC's inspection resources" (Risk Based Inspection System, 2020). The USDA assigns facilities to low, middle, and high-frequency inspection categories with the inspection rates ranging anywhere from every two to three years, once per year, or every three months.

During the pre-licensing inspections and compliance inspections, AC inspectors look at slightly different things. For the pre-licensing inspection, AC inspectors broadly see if "animal facilities, vehicles, equipment, or other sites used or intended for use in the business, comply with the regulations and standards of the Animal Welfare Act." After a zoo receives its license, "Inspectors review the premises, facilities, husbandry practices, program of veterinary care, records, and animal handling procedures" unannounced. The USDA's official Animal Welfare Inspection Guide (2021) provides a template for APHIS Animal Care personnel and serves as a "tool to improve the quality and uniformity of inspections, documentation, and administration of the Animal Care Program" (p. 1-2). The guide also explains the difference between the words "must," "should," or "may," where a "must" is a required action or protocol and "should" is strongly recommended but not required.

If a zoo fails to comply with all aspects of the inspection, the USDA has a plan for enforcement. Recently, APHIS instituted "teachable moments" during inspections. A teachable moment addresses a minor noncompliance issue that does not affect animal welfare and is easily fixed, but it cannot be used at a facility with repeat noncompliant issues. For more serious inspection problems, "AC inspectors are required to reinspect within 45 days any facilities where areas of noncompliance were found that have, or are likely to have, a serious impact on the well-being of the animals." In most cases, a finding of noncompliance, through a Letter of Information, allows a zoo to move forward if the issue is corrected during the time frame;

however, in other cases, APHIS may take action in addition to inspections to promote compliance, including issuing an Official Warning Letter.

An Official Warning Letter gives notice that "the Agency may seek a civil or criminal penalty if noncompliance is found in the future." The USDA website under Enforcement Summaries explains, "An official warning or other regulatory correspondence is not a penalty, nor is it an enforcement action against an individual or business. Rather, the purpose of official warnings and other regulatory correspondence is to provide notice of the legal requirements and information to promote compliance with the law." All instances of teachable moments, Letters of Information, or Official Warning Letters are tracked and documented on the USDA's Public Search Tool in Excel spreadsheets. It is not clear exactly how many warning letters a zoo can receive before a more serious consequence is levied.

For example, the owners of the Greater Wynnewood Exotic Animal Park, the zoo featured in the Netflix show Tiger King, received roughly six official warnings from APHIS between 2020 and 2021, as found through the USDA Animal Care Public Search Tool. One early warning resulted in a 21-day license suspension and the last resulted in a revoked AWA license. Each warning was presented to the Secretary of Agriculture.

For serious issues, specifically problems that pose a serious and direct risk to the health and wellbeing of the animals, APHIS has an official enforcement service called the Investigative and Enforcement Services (IES). IES personnel, a staff of roughly 130 agents, are divided into two groups including the field officers that "conduct investigations and produce reports of investigation (ROIs), and headquarters enforcement staff members that review completed ROIs for evidentiary sufficiency" (Investigative and Enforcement Services, 2021). An investigation

can result in license suspension, financial penalties, or in the extreme revoking a license and confiscating the animals.

Next, I evaluated the inspection protocols for the AZA. The AZA conducts an inspection prior to accreditation and then every facility is inspected two times per year. Additionally, if the Accreditation Commission tables an accreditation, it may conduct a follow-up inspection to see if concerns were addressed, and at the discretion of the Commission it may conduct mid-cycle inspections of any facility that could be of concern. The AZA's inspections are conducted by a team of professionals that is determined specifically for each facility. The Inspector's Handbook (2021) has specific criteria for determining the team composition, stating that one inspector should be from the zoo's previous inspection team, one inspector should be from a facility that is similar in size and budget to the zoo being inspected, and if the zoo has elephants one inspector is assigned for the sole purpose of evaluating the elephant program. Roughly for a team of three inspectors (the most common number of inspectors assigned) one should have extensive experience in operations, one in husbandry and animal management, and one in veterinary medicine.

During the initial application process, a visiting committee with a primary reviewer from the Accreditation Commission spends roughly two to five days inspecting the zoo in its entirety. The AZA inspectors evaluate a zoo for animal welfare, care, and management, the veterinary program, involvement in conservation and research, education programs, safety policies and procedures, security, physical facilities, guest services, quality of the institution's staff, finances, governing authorities, and support organizations (The Accreditation Standards & Related Policies, 2022). Additionally, members of the committee privately interview the staff. The AZA website provides an inspectors' guide that has a sample three day inspection agenda, and detailed

instructions for writing up the individual sections of the inspection report. The guide also contains a section of primary considerations for the inspecting team that includes items such as animal welfare, animal health care, animal security, finances, physical facilities, and a few others. The next section covers commonly found concerns that must be documented and presented to the zoo's director/CEO and the Accreditation Commission. The zoo then must write a response explaining how the facility will fix the issues with provided proof before the accreditation hearing. At the end of the pre-accreditation inspection, the inspectors conduct an exit interview with the zoo's director/CEO to discuss impressions and major accomplishments and concerns.

In between inspections, institutions that have not maintained one or more accreditation standards must present the Commission with progress reports that demonstrate the facility has addressed the issues. The Guide to Accreditation explains that "the Commission may rescind accreditation at any time if it concludes that accreditation standards are not being consistently met and/or maintained. In such a case, if practicable, the institution shall receive immediate notice of the Commission's decision and be afforded an opportunity to be heard" (p. 51). This points to the fact that the AZA does not issue multiple warnings or find ways to promote compliance as does the USDA, but instead maintains strict expectations of zoos to meet standards or lose their accreditation.

Unlike the USDA and AZA websites, the official ZAA website does not contain an informational page solely dedicated to inspection and enforcement protocols. Instead site inspection information is listed with the accreditation process. It states that facilities are expected to adhere to all accreditation standards which includes animal welfare, care, and management, veterinary care, conservation, education and interpretations, physical facilities, safety/security for

staff, governing authority, support organization, finance, staff, guest services, and master and strategic planning, which are all covered in the 33 page ZAA Accreditation Standards document. Additionally, inspectors grade facilities on the following categories: the physical facility, husbandry, animal care practices, animal welfare and well-being, record keeping and health care records, knowledge of animals by personnel, animal diet and nutrition, facility security, veterinary care, licensing and permits, safety plans and risk management. A team of two or more professional members of the ZAA conduct the inspections. It is unclear from the ZAA website how many inspections occur yearly for member facilities or how long the inspections last. Lastly, there is no public information I could locate explains what enforcement measures are triggered when an inspector finds problems within the facility.

Inspection Items:	USDA	AZA	ZAA
Pre-Licensing/Accreditation Inspection	Yes	Yes	Yes
Number of Inspectors Present	1	3 or more	2 or more
Frequency of Inspections	Different for facilities: Every 3 months or 2/3 times a year or 1 per year	2 times per year	N/A
Enforcement Measure	Teachable Moments, Letters of Information, Warning Letter, Official Investigation	Progress Report with evidence of fixed issue or possibly lose accreditation	N/A

Care Standards

In this last section, I work to understand the care standards of the three organizations.

For all licensed facilities, the Animal Welfare Act is the primary guide for their animal care standards. The AWA states its purpose in regards to animal care as follows:

> …the Animal Welfare Act (AWA) sets general standards for humane care and treatment that must be provided for certain animals that are bred for commercial sale, sold sight unseen (Internet sales), exhibited to the public, used in biomedical research, or

> transported commercially… [and] that regulation of animals and activities as provided in this chapter is necessary to prevent and eliminate burdens upon such commerce and to effectively regulate such commerce, in order –
>
> 1) to insure that animals intended for use in research facilities or for exhibition purposes or for use as pets are provided humane care and treatment;
>
> 2) to assure the humane treatment of animals during transportation in commerce;

As the introduction states, the AWA deals with "general standards" and in many ways it covers "general" animal groups with only two sections, nonhuman primates in Subpart D and all warm-blooded animals not covered in any previous sections in Subpart F. Each subsection under Part 3 provides detailed standards for "humane handling, care, treatment, and transportation" that includes things like housing facilities both indoor and outdoor, food and water, cleaning and sanitation, care in transit, and handling. Each of the standards covered, such as how food should be stored, how drainage systems and waste disposal should be handled, what the temperatures for heating and cooling should be, or how high a perimeter fence should be, work to maintain clear but basic living conditions for exotic animals. For nonhuman primates, there is a special section for "environment enhancement to promote psychological well-being."

In general, the AWA requires all licensees to observe their animals to assess their health and wellbeing. The AC division offers a PDF document that describes details of things to look for on the animal or in its environment, but also states that the licensee should consult the attending veterinarian to know exactly the types of things to note and that the observation should be separate from other daily tasks in order to focus solely on the animal's health. The document mentions straightforward guidelines like seeing if the animal is lethargic or bored, if there is

evidence of hair loss or coat change, if there is bleeding anywhere on the animal, and for animals in vet care if the treatment given seems to be working.

The Publications, Forms and Guidance Documents page of the USDA's website provides a multitude of animal care documents to offer more detail in things exhibitors should do to ensure proper care. However, there are few species specific documents. There are aids for primates, bears, nondomestic cats, giraffes, mammals that fly or glide, semi-aquatic animals, and two-toed sloths. Most of these aids are one page documents with visuals and short summaries of information.

In terms of animal contact standards and breeding, the USDA is not very strict. According to a summary provided by the USDA, for zoos that choose to engage in close contact with exotic animals, especially dangerous ones, the animal handler must have two years of training, "with one of those years consisting of direct hands-on training under the supervision of another experienced USDA licensed handler." However, the USDA does not define exactly what the two years of training should consist of. In 2000, the USDA issued an official statement about handling large wild and exotic cats: "Large wild and exotic cats such as lions, tigers, cougars, and leopards are dangerous animals… Care and handling of these wild and exotic cats should be left to trained professionals who have the knowledge and means to maintain them properly" (USDA Position Statement, 2000). This statement serves only as a recommendation to the public and is not a requirement that only professionally trained individuals hold large and exotic cats. In terms of public contact with cubs, the USDA has stated, "Although we do not encourage public contact with cubs, it is possible for an exhibitor to exhibit cubs over approximately 8 weeks of age (i.e., when their immune systems have developed sufficiently to protect them from most

communicable diseases), to the public, and still comply with all of the regulatory requirements" (Big Cat Question and Answer, n.d.).

Finally, zoos wishing to breed exotic animals must have a Class A breeders license, in addition to their Class C exhibitors license. Class A licensed breeders are subject to the same regulations under the AWA as Class C licensees; I can determine there are no specific regulations within the AWA or on the USDA's website that contain detailed information about exotic animal breeding policies.

Lastly, once licensed, zoos are required to provide information about veterinarians who will be consulted or are on staff, along with a "written program of adequate veterinary care." They must show proof of vaccinations, parasite control programs, emergency care plans, euthanasia, additional topics discussed with a vet, and a list of species subject to tuberculosis testing. The USDA's "The Attending Veterinarian" document outlines the vet's duties, including mainly visiting the facility and establishing health and husbandry practices. The USDA makes it the licensee's responsibility to ensure there is "appropriate staffing, facilities, and equipment for adequate veterinary care available, including areas to safely handle animals and any needed capture equipment."

The preamble of the AZA's Accreditation Standards & Related Policies (2022) document states that the purpose of accreditation is to provide zoos and aquariums the opportunity to "examine, meet, or exceed the highest standards in the profession," with the main goal to assure "excellence in animal care and welfare, conservation, education, and research" and care for animals in a "manner that meets their social, physical, behavioral, and nutritional needs, with considerations for lifelong care" (p. 10-11). The AZA standards work to cover every area of operations because the organization believes that "excellence in all areas of operation equals

excellent animal welfare" (p. 3). Therefore, at the start of every section in the standards and policies document a "welfare considerations" box explains how that section's standard relates to animal welfare. While all sections clearly connect to animal welfare, the AZA standards separate animal welfare, care, and management from veterinary care and the physical facility.

Section 1 details the Animal Welfare, Care, and Management responsibilities in seven subsections covering local, state, provincial, and federal laws; animal care manuals, documents and policies; records; animal welfare, care, and well-being; enrichment and husbandry training; and commercial collectors. The AZA standards emphasize the importance of monitoring all animals' physical health and well-being, but more importantly the necessity of monitoring the animals' psychological needs. Unlike the USDA, the AZA requires every animal be assessed and have a documented enrichment program with specific paid staff or committees assigned to provide oversight and implementation. In addition to the general standards, zoos must access and follow the Animal Care Manuals (ACM) posted on the AZA's website. Currently, there are 34 ACMs with roughly 25 new manuals working through the six step process towards publication. The manuals cover a wide range of animals from tigers, polar bears, otters, orangutans, and many others. Through just a random selection, I selected and looked through a few of the manuals. The ACM for polar bears contained 95 pages of guidelines for proper environment and enclosure features, nutrition, reproduction, social environments for possible reintroductions, and many others. Separate from general regulations for all zoo animals' welfare and the Animal Care Manuals for certain species, elephants have their own section of roughly 20 pages within the AZA's Accreditation Standards & Related Policies itself. It is clear that the AZA standards and manuals work to provide as much detail as possible from exotic animal experts to ensure high quality animal care.

Next, the AZA has strict rules regarding its zoos' breeding policies and general expectations for animal contact. All AZA zoos cooperatively engage in Species Survival Plan Programs (SSP) which work to manage ex situ (meaning off-site conservation) species populations. SSPs are developed alongside a specific Breeding and Transfer Plan that "identifies population goals and recommendations to manage a genetically diverse, demographically varied, and biologically sound population" (Species Survival Plan Programs, n.d.). AZA zoos mainly breed and trade animals with other AZA facilities and rarely with other facilities.

The standards book leaves animal contact to the discretion of the zoos, with certain expectations that are subject to inspection. In outlining direct and indirect contact between animals and humans AZA standards state, "Benefits of such contact are multifold…[however], there are significant risks to consider as well, such as injury to animals and people, psychological stress, and potential transmission of infectious disease. It is important for all zoos and aquariums to strategically assess the benefits and risks of animal contact throughout their institutions, and to implement the best, most productive and safe human-animal interactions possible" (p. 12). When in operation, animal contact areas such as petting zoos or touch tanks must be supervised by trained staff. Additionally, the zoo should design facilities, develop animal care protocols, and present animals for public contact in ways that minimize the risk of disease and injury. Under risk management, the AZA's standards state that zoos should develop a risk management plan that includes species and individual animals with which staff (paid and unpaid) and visitors may, or must not, have direct or indirect contact with. In an official statement regarding USDA cub petting policies, the AZA President and CEO stated, "AZA does not support or allow direct, unprotected contact between guests and big cats. "Cub petting" is neither safe (for the animals or people) nor ethical. At AZA-accredited zoos and aquariums, people see and enjoy animals living

as animals, presented in a way that promotes respect, empathy, concern, and responsibility" (AZA News Releases, 2020).

Lastly, the AZA issues guidelines for veterinary care at AZA facilities. Their section initially states that "In addition to a strong foundation of professional animal care staff, the utilization of a highly qualified veterinarian and veterinary staff, and the access to modern veterinary facilities is required" (p. 19). The AZA advises members to consult and adopt the Guidelines for Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals (2016) developed by the American Association of Zoo Veterinarians (AAZV). The AAZV guide states that, "Veterinarians are stakeholders in all aspects of animal health and welfare and must be integrated into the overall management of zoo and aquarium animals including behavior, husbandry, nutrition, reproduction, exhibit design, and conservation programs" (p. 1). The AZA standards themselves for veterinary care are broken down into nine subsections that cover pest control, nutrition, necropsy, pharmaceuticals, and others specifically tailored to the needs of exotic animals. The standards also state "so that indications of disease, injury, or stress may be dealt with promptly, veterinary coverage must be available to the animals 24 hours a day, 7 days a week" (p. 20).

As the ZAA formed out of the AZA, their standards are very similar in certain areas. The ZAA website states that their accreditation objectives are to: "set and follow professional standards for husbandry, animal care practices, and animal welfare and well-being, maintain accurate animal and medical records, enhance the survival of species by the use of appropriate methods, maintain an appropriate, safe, and quality existence for animals kept in human care, and ensure the safety of humans, both staff and visitors, from injury and disease" (ZAA Accreditation, n.d.). In the ZAA standards, animals are split into three classes "for the purposes

of establishing guidelines on perimeter fencing, habitat and other requirements, not for the purposes of establishing whether they are or are not a potential danger to the public" (p. 31). It is not clear from the ZAA standards document why certain animals are placed into their class, but the ZAA has stated it "does not support the keeping of Class I & Class II wildlife as pets. Class I & Class II wildlife are to be maintained solely in breeding or exhibition facilities" (p. 31). Class I animals include tigers, lions, gorillas, elephants, and hippopotami. Similar to the AZA standards, the ZAA requires written plans of enrichment for all animals and emphasizes the need for planning for the animals' physical and psychological well-being. There are no animal care aids or manuals on the ZAA website or within the standards document I could evaluate.

ZAA standards provide specific guidelines for breeding and public contact of animals with certain prohibited actions. ZAA facilities engage in something called Responsible Population Management which contain Animal Management Programs (AMP) that work to "fulfill their important missions of conservation, education, and science" by ensuring "responsible management and the long-term sustainability of living animal populations" through animal transfers, breeding, reintroductions, and occasional humane euthanasia. The ZAA policies serve as guidance to ZAA members to ensure that ZAA accredited institutions are not transferring their animals to "individuals, organizations, or facilities that lack the appropriate expertise or facilities to care for them" (p. 27). Unlike AZA facilities, ZAA members have more freedom and discretion on to whom they transfer their animals and from whom they obtain animals, as long as the process is well documented and they consult with designated Animal Management Programs Coordinators. Within their standards guide, the ZAA states that "exotic animals in mixed herds or flocks may hybridize from time to time. However, breeding hybrids is not accepted and purposeful breeding of hybrids is strongly condemned by ZAA" (p. 32).

Regarding public contact, the ZAA prohibits Class I carnivores and Class I and II primates from coming into contact with the public. There are specific weight restrictions for public contact for certain species and requirements for the number of staff present to handle the animals. Page 33 of the ZAA standards document clearly states that "No ZAA professional member or accredited facility shall participate in intentionally supplying or acquiring non-domestic baby or juvenile animals to be used in the pet trade or on a temporary basis for brief encounters and/or photos with the public. ZAA professional members and accredited facilities may not be part of a revolving door business of animal encounters or photo opportunities."

Under veterinary care the ZAA standards states, "ZAA-accredited institutions should ensure the health and welfare of all animals in their care. In addition to a knowledgeable professional animal care staff, the utilization of a qualified veterinarian and veterinary staff and access to modern veterinary facilities is required" (p. 8). The veterinary care standards are very similar to AZA policies, as ZAA standards recommend their facilities consult the Guidelines for Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals (2016). Also, ZAA veterinary standards cover the same regulations for nutrition, preventative medicine, pest control, and others with an overall emphasis on ensuring use of the most modern health and veterinary practices. Additionally, the ZAA states that "to provide an immediate response to any indication of disease, injury or stress to an animal, veterinary coverage and/or communication but be available 24hrs./day, 7 days/week" (p. 9).

Care Items:	USDA	AZA	ZAA
Care Goals	Provide general standards for humane care and treatment with husbandry practices to promote animals' health and wellbeing	Excellence in animal care and welfare that meets their social, physical, behavioral, and nutritional needs	Set and follow professional standards for husbandry, animal care practices, and animal welfare and well-being
Enrichment Programs	Written program for nonhuman primates	Documented enrichment program for all animals under staff oversight	Written plans of enrichment for all animals
Veterinary Plan	Written program of adequate veterinary care with part-time vet on staff or consulted vet	Highly qualified veterinarian & staff under guidance of AAZV protocols with access to modern veterinary facilities	Qualified veterinarian & staff under guidance of AAZV protocols with access to modern veterinary facilities
Animal Care Aids	7 species on 1 page documents	34 species aids with 25 in the process for publication	N/A
Animal Contact Policies	Discretion of zoo but requires handlers have 2 years of experience; allows cub-petting	Discretion of zoo with documented risk management plan for direct and indirect contact; no contact with big cats	States no cub-petting policy; discretion left to zoo with weight restrictions and number of staff present
Breeding Policies	Must obtain breeder's license subject to AWA regulations	Species Survival Plan Programs that manage animal breeding and transfers for benefit of species future survival	Responsible Population Management & discretion in zoos for general breeding and transfers. No hybrid species

Comparative Analysis Conclusion

Overall, this part of my research provided me with in-depth knowledge of the regulatory processes and standards across the three organizations. It was important for my project to evaluate first-hand a range of USDA, AZA, and ZAA documents in order to effectively compare the organizations. Although I was unable to locate every piece of information I wanted, the documents I did find allowed me to understand the licensing requirements, inspection protocols, and care standards across the three agencies that fed nicely into the interviews I conducted to build upon this analysis.

Chapter 6: Interview Results

As noted earlier, I was only able to conduct five interviews, four through zoom and one over email. I reached out to roughly 100 zoos from across the country by emails, follow-up emails, and phone calls. Reaching out to ZAA and AZA zoos was easier because the contact information on the zoo's website or through the accreditation websites was more up to date and reliable. Some licensed-only zoos' contact information was outdated or did not go through. While I had specifically hoped to interview roadside zoos or zoos that had been cited by the USDA for noncompliance, unfortunately I either did not get a response from these zoos or the zoos were not receptive to an interview. This is a clear limitation for my research, as I will not have the perspectives of those zoos on AWA regulations or USDA oversight. It is also important to note the possibility of bias from the interviewees from accredited facilities, as they most often expressed their belief that all zoos should be accredited.

I conducted the interviews from August 2021 to January 2022. The zoos included one licensed-only zoo, one ZAA accredited zoo, and three AZA accredited zoos. The zoos varied by geographic locations, finances, and size. I gauge zoo size by the number of full time staff members, small 1 to 100, medium 101 to 200, and large 201 or more. I spoke with both male and female staff members with slightly different roles. Although my interview pool is limited in number, the variety within the pool of interviewees is impactful for the answers I received. Below are summaries of the interviews written under pseudonyms.

Interviewee Pseudonyms	Job Title	Type of Zoo	Zoo Size
Ms. Davis	Manager of Zoo & Interpretive Services	County Licensed	Small
Ms. Johnson	Animal Welfare Specialist	AZA Accredited	Medium
Mr. Williams	Executive Director	ZAA Accredited	Small
Dr. Miller	Director of Animal Care	AZA Accredited	Large
Mr. Smith	Curator of Applied Animal Welfare	AZA Accredited	Large

Ms. Davis

Ms. Davis is the Manager of Zoo and Interpretive Services at her small zoo that is currently licensed only, but is working towards ZAA accreditation. She stated that she grew up sensitive to animals in need and loved her local zoo, so after college she decided to go through a two-year intensive program for a degree in animal behavior and management. She has been working within zoos in some capacity for roughly 15 years. The zoo where she works has a variety of species and a mission of fostering an appreciation and respect for wildlife through education and stewardship to inspire a commitment to conservation. Ms. Davis noted that her zoo has three primary veterinarians on staff, but also has a contract with a nearby veterinary group that specializes in certain exotic animals and different services and surgeries.

Regarding the AWA, Ms. Davis believes the standards have not helped her establish good care standards for her zoo animals, but rather have informed her of what might be inspected. Although the AWA provides a helpful reference for facility regulations like fence height, she believes it sets the minimum requirements that fail to take into account each species' needs and individual personalities. She said she always has to go beyond the AWA through "reading articles, networking with other professionals, using AZA resources, and even asking her USDA inspector for guidance" on certain aspects of animal care.

Ms. Davis's zoo lost its AZA accreditation in the early 2000s but is now working towards ZAA accreditation, giving her a unique perspective on the two organizations. Ms. Davis

explained that as a county-run zoo under a board of supervisors, her zoo faced financial constraints that led to the loss of its accreditation; certain required, albeit small, facility fixes were not in the budget. Ms. Davis says her zoo strives to meet the AZA's the standards, and she wants to continue to engage in SSP programs that are harder to do without AZA accreditation, but she also feels that for a small zoo the AZA expectations and regulations can be hard to meet financially. She believes that being ZAA accredited is a good stepping stone to getting the board of supervisors to agree with becoming AZA accredited again. Ms. Davis disagrees with some ZAA policies on breeding, buying, and selling animals, but overall she believes the ZAA is working to become a more respected organization.

Ms. Johnson

Ms. Johnson at her AZA accredited zoo, serves as the Animal Welfare Specialist where she oversees all animal welfare programs and assists with enrichment planning. Her zoo has African elephants, brown bears, southern white rhinos, big cats, giraffes, reptiles, and as the welfare specialist her job is to ensure each animal receives excellent care. She noted that she focuses on increasing enrichment and training plans, habitat modifications, and looking holistically at the animals' welfare to encourage behaviors comparable to those exhibited in the wild. As an AZA accredited zoo, she believes that the AZA standards represent the gold standard of animal welfare. Ms. Johnson said the organization is always growing, developing, and constantly improving standards based on new research and as experts gain more knowledge. The AZA offers an abundance of trainings and information for staff members and a true emphasis on animal welfare and conservation.

Ms. Johnson spoke at length about both the AZA and USDA inspection processes. She explained her zoo has a good relationship with their USDA inspector, as they communicate

freely and often when needed, and her zoo is inspected at least once per year. She noted that the inspection process for newly licensed zoos is more detailed than zoos renewing their license. In any case, Ms. Johnson stated the inspectors examine the animals' habitats, looking at how much space there is, how much shelter is provided, or how deep a pool is; their veterinary capabilities such as equipment, staffing, and medications; their records on diets and medical histories; and the overall health and appearance of the animals. Ms. Johnson finds the AZA inspections to take a more extensive, comprehensive look at the zoo as a whole. The inspectors, who she said includes a broader group of individuals, look at all the paperwork and documentation on financial information, education, conservation efforts, involvement in SSP programs, animal care, veterinary care, and more. She believes they come into the inspection with a focus not only on the animals themselves, but how the zoo works overall, how it will continue to run and give stable care, and how it will continue to support conservation efforts and the protection of wild species.

Mr. Williams

Mr. Williams is currently the executive director of his small ZAA accredited zoo and has worked in or around AZA, ZAA, and licensed only zoos all of his adult career. He described his zoo's mission in short as inspiring people to do something for the environment. He believes the goal of a zoo should be to constantly educate guests about the animals and increase their knowledge and awareness of ways to help the environment and animal conservation programs. Mr. Williams explained that his zoo has animal presentations and a variety of animal encounters with sloths, lemurs, or giraffe feedings with the purpose of educating guests and allowing them to make a connection with nature that will inspire them to act.

Mr. Williams spoke candidly about how he views the regulations of the AWA and the USDA's oversight measures. He noted that the AWA is a good starting point for animal care as a basic legal standard: you must at least do this every day and you must document what you are doing for these animals. He did note that the standards are very minimal, as he would never feel comfortable keeping an animal in cages or enclosures as the AWA allows, and that the standards are general and do not account for all different animal species and individual needs. He stated that the standards the ZAA and the AZA provide are ones he strives for and believes every zoo should strive for. He brought up the fact that between working for both AZA and ZAA facilities, he felt as though the only main differences between the two are that the AZA provides a more recognized standard, that the ZAA animal standards are more defined than the AZA's, and that the AZA does a good job of looking at all aspects of the organization, especially in terms of financial security and conservation and education measures.

While he brought up his concerns and opinions about the AWA regulations, Mr. Williams understands that the USDA license is the only thing that allows his zoo's doors to be open, so following the rules and regulations is crucial from a business standpoint. He stated he has always tried to accept the USDA's expectations for care, and he noted that the USDA is working to change its approach during inspections from issuing constant warnings and making zoos weary of inspections, to using inspections as a positive training experience by instituting teachable moments for minor issues and explaining why the issues should be addressed.

Dr. Miller

Dr. Miller is the Director of Animal Care at her large zoo and has her Ph.D. in Reproductive Biology. Although she did not grow up going to zoos or believe she would ever work at one, she discovered on a trip to Kenya how much zoos were actively involved with

conservation and research efforts. As a reproductive biologist, she saw a need to help manage breeding programs. Her zoo, made up of roughly 300 species, has many endangered species, has a pretty successful breeding program for many birds and certain reptiles, and long running species recovery projects for locally endangered species near the zoo. Due to its large size, her zoo has three full time veterinarians on staff with multiple consulting veterinarians, specialists, and even professional surgery teams. Her zoo's mission is to inspire everyone to make conservation a part of their lives and everything her zoo does is driven by the mission.

Dr. Miller believes that providing quality animal care is an art and science, where the best keepers and care staff are people who not only know the facts and specifics of what an animal needs for its mental and physical health but also can connect deeply with the animals as individuals. In terms of animal care, Dr. Miller explained that at the foundation there are the regulations and standards expected from the USDA, which to her are the minimum standards, and the AZA, which are much more comprehensive, but she went on to say how her zoo focuses their care standards for every animal around "the five opportunities." "The five opportunities are globally recognized as the gold standard in animal welfare, encompassing both the mental and physical well-being of animals; they include: freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury, and disease; freedom to express normal and natural behavior" (American Humane, 2016). Her zoo conducts extensive welfare assessments for every animal to ensure they are expressing the same variety of behaviors they would in the wild, that their nutrition mimics what they would be used to, or that their physical environment matches their natural habitat.

As a zoo that works heavily with conservation efforts and species breeding, Dr. Miller spoke about the benefits of being AZA accredited. Dr. Miller's zoo is involved in a number of

SSP programs, so transferring and acquiring animals is an important component of her zoo's animal care process. She stated that her zoo mainly works with other AZA facilities for animal transfers, but if they work outside of that they conduct an extensive process of paper work and inspections to ensure the zoo has a veterinarian on contract and overall gives quality animal care. She mentioned that in her opinion the ZAA is broader about with whom they can trade animals and is overall not as strong of an organization. For her, AZA accreditation provides a strong network for support and ensures that real conservation work and animal education is accomplished. Dr. Miller also believes that AZA accreditation provides stability within the zoo and ensures that the animals will receive good care, the staff are well trained, the zoo is actively led by its mission, and that funding is not an issue. So, in her view, while some licensed only zoos or zoos labeled as "roadside zoos" might provide excellent animal care, without the accreditation there is no assurance that these standards are maintained.

Mr. Smith

Mr. Smith is the Curator of Applied Animal Welfare of his large AZA accredited zoo with nearly 15 years of experience in a variety of roles including conducting research studies on human and primate evolution and animal behavior; elephant curator; and many others. His zoo has almost every taxonomy group, but focuses on working with ones that are threatened, endangered, or extinct in the wild. He does a lot of work with the conservation sites the zoo partners with and with the animal release programs to help prepare animals for release back into the wild, ensuring that they are ready to survive in their natural environment again. His zoo also works closely with the local Fish and Wildlife Service to help tackle wildlife trafficking. Mr. Smith's zoo's mission is to combine professional and quality animal care and conservation efforts to ensure that ecosystems around the world are healthy and thriving.

Mr. Smith shared extensive knowledge about the different animal care standards that his zoo works towards. He stated that every staff member is required to take animal care courses and trainings and is provided operational guideline handbooks, so they are well equipped to care for a variety of animals. Mr. Smith explained that although his zoo adheres to the minimum regulations within the AWA, if not consistently exceeding the requirements, his zoo has shifted their animal care practices away from what he called "input driven" expectations to "outcome based husbandry" through the five opportunities mentioned by Dr. Miller. Mr. Smith stated that the AWA and most regulated animal care practices say a keeper must feed the animal, keep records, provide clean water, provide certain dimensions for space, etc., but what his zoo wants is "a situation where your animal is expressing behaviors at a frequency and diversity that match its natural history." He noted that while the AWA requires an enrichment program for primates that is meant to institute some of these physiological well-being ideals when it comes to the USDA inspection, the inspectors simply ask to see the records on the enrichment program, not necessarily if it is being implemented or ask for an animal welfare assessment. It was from this that Mr. Smith went into depth about some of the differences between the AZA and USDA inspections.

Mr. Smith said the majority of the USDA inspection deals with housekeeping. He explained that it is much more than inspectors pointing out cobwebs and writing up noncompliance forms, but that they will point out a cobweb and think that if that area is lacking in upkeep, what else could be lacking? He said the inspectors mainly look at records, like the enrichment plans, veterinary records, and research programs, they will ensure all safety measures are enforced, and they will evaluate the animals' health, food sources, and medicines, among many other things. On the other hand, Mr. Smith said that the AZA accreditation process and

inspections are much more intensive. The inspectors look at every aspect of the organization, from staff training and satisfaction to finances to welfare assessments for each individual animal, and they are constantly checking all the new standards and regulations that the AZA requires in detail. Mr. Smith noted that once the inspection is done, there is the exit interview, then the final report and the possibility of an accreditation hearing, so the process is much more extensive.

Themes from Interview Data

After analyzing the interviewees' answers, four themes emerged that identify important similarities and differences between the interviews. The themes are 1) the purpose of the Animal Welfare Act, 2) goals of a modern zoo and animal welfare, 3) USDA inspection details, and 4) accreditation benefits or drawbacks.

Purpose of the Animal Welfare Act

When asked to describe the purpose of the AWA, the interviewees all used the phrase "minimum standards," "basic standards," or "starting place for standards." Ms. Johnson stated that the AWA was good at "protecting the animals," Ms. Davis said it "provides oversight and requirements to ensure animals are provided with safe and adequate care," and Mr. Smith said it is basically "a safeguard against cruelty." Mr. Smith noted that the AWA is doing a hard job of setting standards that the richest and biggest zoo and the smallest, poorest sanctuary are expected to meet. As will be examined more in the next theme, all interviewees noted that they rarely look to the AWA for care standards, but rather they go above and beyond the regulations and turn to other resources. The strengths the interviewees identified was the way the AWA works to protect animals overall, even though it is minimal, and how, according to Ms. Johnson and Ms. Davis, compliance with the AWA is a tangible way to hold people accountable for their animal care across a variety of institutions. However, Ms. Davis noted that "there have been many [zoos] that

I have seen in my career that deserved to lose their permit and their animals due to neglect and improper care." While a few of the interviewees mentioned that standards in the AWA can be vague, Mr. Smith noted as one of his positives that in certain circumstances the broad regulations are good. For example, he said that in one section of the AWA it simply states a facility must have a system in place for facility maintenance. He explained that when a USDA inspector sees that a facility is failing to maintain a safe and healthy environment for the animals, they can cite it for noncompliance as a way to fix it.

In terms of weaknesses within the AWA, a few noted the limited number of animals covered, the vague expectations, or the focus on basic inputs for survival. Ms. Johnson pointed out that an obvious weakness is that the AWA mainly focuses on mammals, noting it "misses out on birds, reptiles, fish, amphibians, and even invertebrates." Mr. Smith believes that the AWA is working to engineer standards, or specific standards transferable to all species, and is too heavily focused on the inputs, which he stated can be "a recipe to cut corners as far as I'm concerned." Mr. Smith, who had once worked in a laboratory, said he understands why a cage requirement for a monkey might be just wide enough for it to stand up and turn around in a laboratory setting, but those standards are now applicable in all situations, even though they should not be occurring in a zoo.

Goals of Modern Zoos & Animal Welfare

Building off of the purpose of the AWA, each interviewee made it clear that their zoo held itself to much higher standards for their zoo's goal and for their animal care. When asked to describe or state their zoo's mission, each interviewee mentioned aspects of conservation and quality animal care. Most interviewees stated that the goal for their zoo is to inspire or motivate the public to engage in conservation and care for or respect wildlife. Each mentioned either breeding

programs, reintroduction programs, or work with endangered species help to rebuild specific animal populations. It was clear that the zoos' work is two-fold: to rebuild species and rebuild their habitats, both locally and internationally. Mr. Williams summed it up by saying, "my feeling is, that if we're not doing something to increase the education of our guests, increase the knowledge base of our guests, or doing something as a part of a conservation program with the species, then you know what, why do we have it [the zoo]? They've got to be ambassadors for bigger and better things."

For animal care, each interviewee made it clear that they never expect anything less than the best standards. As professionals in the zoo industry, these individuals understand that animal care is not simply giving exotic animals the best nutrients or exhibits that mirror a natural environment, it is a holistic view of mental and physical care to not simply survive. Each interviewee stated that they look to recent research studies, articles, and the AZA for creating care plans for each animal. A few of them mentioned that zoos should lead the way in improving animal care, not simply adhere to minimum standards to keep a license. Dr. Miller, similar to Ms. Johnson, in particular noted that USDA inspectors really only examine mammals, not having the resources to cover all the different taxa, which she believes makes a strong statement about how the government and we as a society view animals. It was obvious from all interviewees that they are passionate about what they do for their animals.

USDA Inspection Details

Each interviewee made clear the USDA does a good job of staying on top of their unannounced inspections, staying in regular contact with the zoo, and following up on issues. At least two of the interviewees said that their USDA inspector had come to their zoo for advice on issues or to use their zoo as a resource for information. As Mr. Williams has worked in a few different zoos,

he provided some insight into the inspectors and their visits. He noted that each inspector might have specific priorities, making it important to develop a relationship with them. He noted one inspector looked specifically at cobwebs, Ms. Davis stated that her new inspector looked for peeling paint and unsealed wood, and Dr. Miller noted hers had looked for rust and mold. Additionally, Mr. Smith pointed out that usually two individuals come, a regular inspector and a veterinary medical officer, (VMO). He noted that the VMO is very detail oriented and again, might have specific pieces of advice or different areas of focus during a visit. Ms. Davis noted that, "Some of their information is vague in regards to animals in zoos and each inspector tends to focus on different things. It is not always easy to know what details we should focus on that are not written anywhere but are looked at on inspection." Each interviewee stated that the inspection was detailed, but in each of their responses they pointed to the detailed examination being in records, food storage areas, guest safety protocols, or exhibits, not necessarily how the inspectors look at the animals.

Accreditation Benefits or Drawbacks

Even though each of the zoos advocated for accreditation, as each one was either already accredited by the ZAA or AZA or working towards it, the interviewees spoke candidly about some of the benefits, drawbacks, or differences with being accredited. Every interviewee noted that being accredited gives them access to important resources, demonstrates to the public that they hold themselves to a high standard, provides an extra level of accountability, and gives them a network for conservation programs. In particular, each interviewee mentioned being a part of the AZA's Species Survival Programs, SSP programs, and the importance of these breeding programs. Even Mr. Williams, who works at a ZAA facility, noted that his zoo works with the AZA SSP programs and has utilized their animal care manuals. Ms. Davis noted that she

consistently turns to the AZA for additional information on animal care and welfare guidelines. Ms. Johnson, Dr. Miller, and Mr. Smith noted how much more in-depth the AZA facility inspections are and how important it is to them to have so many opinions and eyes on the way they conduct their animal care to ensure they are reaching the highest standards. Mr. Smith also pointed out that the accreditation organizations do not have the USDA's level of bureaucracy, which make it difficult to change the AWA, so the AZA and ZAA are able to constantly improve care standards based on changes in public opinion or new research. As noted earlier, a few of the interviewees pointed out that the main differences between the AZA and ZAA is who they can work with for breeding purposes and the AZA's higher level of credibility.

For Ms. Davis, working at a zoo outside of accreditation status currently, the struggle to maintain AZA standards financially and in some of their breeding programs have been a challenge. She said, "We still participate in some of the SSP programs but we are limited on many of the benefits we would have because we are not fully an AZA zoo. Even some of the SSP groups will no longer work with non-AZA institutions. Example: We have some animals that are in SSP that are currently alone. Because we are not AZA, we have to wait for a surplus animal to be available as a social partner. If we are willing to pay, we can get one from a ZAA institution but it is not part of a nationwide breeding program for conservation." Ms. Davis made clear that there are safeguards in place within the AZA for good reason to ensure exotic species are not merely shipped around for breeding, but at the same time it places non-AZA accredited zoos at a disadvantage to engaging in meaningful conservation efforts as well.

Interview Conclusion

Overall, the five interviews I conducted allowed me to obtain perspectives of zoo staff members from across the country about the animal care standards and licensing and accreditation

details for zoos. By summarizing the interviews and examining overall themes, I was able to see numerous similarities and differences from each interviewee's viewpoint. Although my interview had some limitations, the interview process gave me a deeper understanding of the issues I will address in my discussion and policy recommendations chapter.

Chapter 7: Discussion and Policy Recommendations

My comparative analysis and interviews with zoo members confirmed and challenged several key points from my literature review and helped deepen my understanding and perspective of how the US government can increase exotic animal care in the country. My comparative analysis was not as all-encompassing as I had hoped, mainly due to some information not being available to me, and my interviews did have certain limitations. However, the results of my research were informative for comprehending strengths and weaknesses of zoos' care standards and oversight and enforcement policies of those standards in the US.

Many of my interviewees explained the role zoos must play in society in the 21st century and connected it directly to projects their zoos are involved in and the care goals they hope to achieve. Every interviewee emphasized conservation, education of guests, and fulfilling all animals' physical, mental, and behavioral needs as the purposes for their zoo existing, and each noted the amount of impact their zoo's work has on their guests and on conservation efforts in the US and around the world. This lines up with the literature showing that many zoos have (and the rest should) moved away from putting animals on display solely for profit towards a goal-oriented purpose of achieving the highest level of care for animals and putting education of guests and wildlife conservation as high priorities. From the comparative analysis, the purpose statements of the AWA and the AZA and ZAA accreditation standards manuals built off of scholars' findings that some documents solely focus on animal welfare while others regulate human behavior in the hopes of promoting animal welfare. By analyzing the purpose of the AWA it was clear the USDA is focused on commerce and business first, whereas the AZA's and

ZAA's main focus is the animals' wellbeing. It was important to understand that the AZA and ZAA documents and standards are created solely to ensure zoos are meeting the highest standards of care whereas the AWA, as Mr. Smith pointed out, is working to cover all commercial industries where animals are used by humans. This does not, however, justify the lack of improvements to government policy.

Building off of the purpose of zoos, my research shows that the USDA believes care standards can be engineered and transferred to most animals, unlike the AZA and ZAA that believe care standards should be crafted for each individual animal, which relates back to Jodidio (2020). Specifically, a few interviewees built upon the literature finding that the AWA has a very limited scope on which animals are under their protection, deserve adequate care, and deserve enrichment, whereas the ZAA and AZA require their zoos to develop enrichment programs for every animal and their animal care manuals are more extensive, covering more species in greater depth. The USDA's animal care aids provide basic education on certain species, given the USDA is attempting to educate licensees who may not be professionally trained. After reviewing the USDA's care standards for zoos, there was a pattern of words such as "adequate," "minimum," and "general," and as noted, each interviewee explained how the AWA standards were only a starting point. The comparative analysis and interviews directly build upon the arguments that scholars like Jenks (2019), Marceau (2018), and Grech (2004) make about how the AWA has only minimal, outdated, and nonspecific standards.

While not necessarily covered in the interviews or comparative analysis, it is possible to understand why bad zoo practices such as cub-petting and poor living conditions can occur, due to the fact that the USDA simply does not provide regulations for those issues. My comparative analysis found that unlike the AZA and ZAA that have strict animal contact and breeding

policies for all animals, the USDA only offers suggestions that individuals in zoos not engage in close contact with animals and requires only minimal training and safety measures. Additionally, I did not find any specific USDA breeding guidelines for exotic animals, thus most zoos are able to engage in poor practices. Additionally, while the AZA and ZAA require that a trained veterinarian always be available and follow American Association of Zoo Veterinarians (AAZV) protocols, the USDA only gives general guidelines for testing for diseases and giving vaccinations, while placing the responsibility for quality equipment and facilities on the licensee with little guidance. This aligns with the literature from scholars like Marceau (2018) and Bloch (2020) who note that zoos fail to give their animals quality vet care simply cite their AWA compliance as a defense; they are simply meeting the USDA's engineered, vague, and minimal standards that as Mr. Smith called "a recipe to cut corners."

As each interviewee was either from an accredited or previously accredited zoo, their insight into the two accreditation organizations built upon Jodido's (2020) finding that the AZA and ZAA both hold their zoos to higher care standards than the AWA. Jodido (2020) also noted that the AZA follows strict breeding guidelines through the SSPs and every interviewee mentioned the resources and network that accreditation has given their zoo, which connected back to Hickel's (2015) argument that both organizations mainly build resources and name recognition for their zoos. Specifically, my interview with Ms. Davis demonstrated the amount of resources that can be lost when a zoo loses its accreditation. Her zoo pushes against the notion that all good zoos are accredited, which scholars like Lamont (2015) suggest, but shows that her zoo, at least, strives to move far beyond the AWA's standards and achieve the care standards and conservation goals of the accreditation organizations.

Through my comparative analysis, I found that both the ZAA and AZA had strict guidelines for animal contact to ensure safety and had official statements prohibiting their zoos from engaging in cub-petting or photo opportunities with young animals, which challenged the findings from Jodidio (2020) concerning poor practices from the ZAA. In line with the literature, however, I found that the USDA had vague safety guidelines and still allowed public contact with cubs over 8 weeks, although the USDA does not encourage the action. Overall, from the interviews and the comparative analysis I found that scholars were correct in finding that the AZA and ZAA are goal-oriented organizations that focus all aspects of their operation on animal welfare and conservation whereas the USDA fails to hold animal care as a top priority over business.

In highlighting the differences in priorities of the USDA and the AWA versus the AZA and ZAA, my research evaluated the level of oversight and enforcement each group has over its zoos. From the comparative analysis, it was clear that the USDA has no real expectations or selective measures for individuals applying for an exhibitors license. They are only required to fill out the application and pass an initial inspection, which contributes to the sheer number of zoos that APHIS inspectors are required to oversee. Licensees are now required to have a re-license inspection after three, but there is nothing that prohibits zoos with an extensive history of noncompliance from receiving a new license. On the other hand, since the AZA and ZAA are private, selective organizations, their application processes include extensive paperwork and multi-day inspections. They have much more direct oversight of their zoos as they have a small number to oversee, and especially the AZA looks into every aspect of how the zoo is run. This relates back to Stanley's (1998) and Grech (2004)'s arguments about the OMB's influence over the USDA, contributing to the USDA's over-emphasis on business versus animal care. Both

scholars argue that the agencies are focused more on the actual giving out of licenses and supporting the industry of animal exhibition, rather than enforcing the AWA. So, by the USDA effectively handing out licenses with truly no evidence of the zoo being able to care for animals financially or in terms of training and experience, they are failing to accomplish animal welfare.

Although it is good that the AZA and ZAA are so selective with their memberships, the costs associated with accreditation is a clear hurdle for many zoos trying to build their public credibility while engaging in positive species breeding programs and conservation efforts. Ms. Davis's county-run zoo shed light on Burba's (2018) argument concerning zoo budgets and the amount of associated oversight. As the manager, Ms. Davis noted how she is responsible for simultaneously achieving the best animal welfare standards while also justifying expenditures to the board of supervisors. So, while Ms. Davis not only has USDA inspectors who oversee her zoo, she also reports to a board for additional oversight, and she hopes for ZAA or AZA accreditation which would provide even more oversight. Those different points of contact are important for Ms. Davis, but at one point she mentioned that her board of supervisors would much prefer her zoo become a sanctuary to cut down on expenses, while her staff wants to stay a zoo and work on breeding and conservation projects. Burba (2018) spoke about this type of dilemma where important decisions on animal care and budgetary issues must go through a group of public officials who have no background in animal welfare.

Building off of the discussion of budgets and funding, multiple scholars found the USDA to be underfunded and failed to give proper resources to APHIS to uphold the AWA. My research did not find evidence of budgetary constraints, but the application fees and inspection details shed light on just how much money is needed to remain licensed or accredited. The USDA's application fee is currently $120 while the ZAA is around $800, and the AZA is

multiple thousands of dollars. While it is unclear where the USDA's application money goes, the AZA's and ZAA's higher amounts translate into more trained inspectors. Each interviewee noted the multi-day inspections and the extensive time an individual inspector, out of the multiple inspectors present, would spend focused on their specific area of training and expertise. However, the interviewees noted that the one or two USDA inspectors present were not necessarily experts in animal care and Mr. Smith noted that the VMO present was not necessarily board certified. These finding build upon Grech (2004) and Snyder (2009), who argue that the USDA is left spreading out limited resources and not ensuring fully trained animal welfare inspectors are kept on staff. Additionally, the interviewees noted that some AWA standards are vague and each inspector might have specific items of focus, so preparing for inspections can be difficult. This aligns with the argument presented by Big Cat Rescue et al. (2012) who believe the vague standards and lack of consistency lets zoos find loopholes in maintaining AWA compliance.

As the inspections and follow-up enforcement actions are the main way zoos are held accountable, it was good to hear each interviewee note the strong relationship they had with their APHIS inspector, and particularly how inspectors' use of teachable moments for minor issues led to positive changes. The zoos I interviewed had never received multiple warnings for noncompliance, so in my comparative analysis I sought to determine the correlation between warnings and compliance. While the AZA had a single step process for solving issues through a progress report, the USDA had three different ways of sending warnings before opening an investigation. Additionally, the USDA website stated that warning letters are not a penalty but rather a way of promoting compliance, so in essence Winters (2018), Marceau (2018), and Jodidio (2020) one right that the USDA has trivial enforcement efforts, allows numerous

warnings to accumulate, and uses a system of warnings that in general shows no evidence of motivating compliance. Unfortunately, I was unable to find data regarding the frequency that zoos lose their licenses.

My discussions with interviewees and my comparative analysis led me to multiple potential policy solutions to increase exotic animal care and positively shift the impact all zoos have within the US. To achieve improved welfare standards and levels of oversight and enforcement for all zoo animals, I suggest passing new legislation specifically for exhibitors and their animals, separate from other types of animal businesses, and placing sole licensing responsibilities and enforcement of protective animal legislation under the Department of the Interior, with specific licensing and inspection changes.

Policy Recommendations

In 1966, the AWA was important legislation that set a new precedent for the US government stepping in on behalf of animals' safety and wellbeing; however, as decades have gone by my research shows that in terms of helping exotic species exhibited to the public, the AWA is a business model that does not make the distinction between *not* committing animal cruelty and obtaining real animal welfare. Additionally, as domesticated dogs and cats are fundamentally different from exotic animals and animals exhibited to the public are different from those used in laboratories, the care expectations for exotic animals on exhibition should have their own model for proper practices. Having a separate model will also ensure more direct oversight and accountability measures are maintained as that was the main positive the interviewees discussed about the AWA. After evaluating the AWA, I agree with Jenks (2019) who stated, "Instead of amending a law that many consider to be a failure, Congress could opt instead to propose an entirely new law with a specific purpose and intent to provide affirmative

protections for captive exhibited animals…Further, a law that applies to all zoo animals would solve the absurdity of some captive exhibited animals having extensive federal protections and others having none at all" (p. 1125).

Through a review of the literature and in my discussion with my interviewees, I realized the federal government has the responsibility of defining how the US views animal welfare practices and deciding whether or not zoos should represent modern care and educational purposes or whether they should continue to prop up the idea of exotic animals existing solely for photo opportunities and profit. Therefore, new legislation should push all zoos to shift their operational focus by including the following provisions. First, the definition of an animal protected by this new legislation should be more inclusive. Snyder (2009) for example mentions that is should include domestic, feral, and wild animals and should include warm-blooded and cold-blooded. Additionally, the definition of a zoo should be updated to establish more clearly to the public what a zoo is and does in the modern era. I recommend a definition that points to a zoo being a facility where wildlife is kept and given appropriate care for the purpose of educating the public and protecting species and their habitats. Zoos today should be for more than entertainment purposes, their definition should reflect this. A new definition would also help make it much clearer to the public what a quality zoo is versus a substandard roadside zoo.

Next, this new legislation should focus not solely on the regulatory care standards for survival as the AWA does now, but instead provide species specific care guidelines that, as Melfi (2009) states, should evidence-based housing and husbandry standards that lead to animals displaying natural and healthy behaviors. Additionally, by moving away from simple and generalized regulations of amount of water that must be present or cage size requirements, Jodidio (2020) argues that including species specific guidelines would help to establish clearer

regulations and allow inspectors to make informed decisions about when an animal might be suffering. Instead of having the one-page general guidelines for certain selected breeds that exhibitors can choose to ignore, the species specific regulatory standards should be part of the licensing document. Overall, the new regulations should be closely in line with and informed by what animal welfare professionals, such as the Detroit Zoological Society's (DZS) Center for Zoo Animal Welfare (CZAW), work towards in its "Universal Animal Welfare Framework for Zoos." While ideally the standards set by the AZA and ZAA, all zoos and exhibitors should strive for, it is more important to change the federal government's policies and care standard expectations while ensuring even the smallest zoos can achieve high quality standards.

This new legislative framework should include explicit statements regarding cub-petting and animal contact policies similar to those of the AZA and ZAA. All licensed zoos should have established protocols for animal contact that ensures safety for the public and the animal, and the US government should officially prohibit cub-petting. Additionally, all zoos should be required to provide proof of a certain level of professional training. The new legislation for zoos should contain a section solely dedicated to exotic animal breeding guidelines as a way to ensure any breeding separate from the AZA's SSPs is done in a way that prioritizes animal conservation. Lastly, the US should pass the Big Cat Public Safety Act which would limit breeding and animal trading through changes to the Lacey Act.

A completely new regulatory law for zoo animals and exhibitors will set new expectations. This new law should have a purpose statement that solely advocates for better treatment of exotic animals and demonstrates to the public that licensed only zoos can be trusted to truly provide modern care whether or not they are accredited or for-profit. The enacted framework should include requirements for educational programs and conservation efforts for all

zoos. Through this new legislation the US's zoo industry can truly reshape its focus to advocating for animal welfare, conservation, and appreciation of wildlife instead of being purely motivated by profits or displaying exotic animals for entertainment.

Overall, raising care standards from minimum levels to modern expectations is half the issue I hoped to address in this thesis. While a new animal welfare legislation should be passed solely for zoo animals, I understand that might not be possible, and thus as a fallback the AWA should be amended to include many of the regulations and welfare considerations above. Whether new legislation is passed or the AWA is modified, guaranteeing new care expectations are properly enforced for the overall benefit and wellbeing of the animals is crucial. Therefore, I also recommend that the sole enforcement of protective animal legislation be placed within the Department of the Interior.

Through my comparative analysis and interviews I came to the conclusion that while the USDA and its APHIS inspectors are fairly good at evaluating the record-keeping and general maintenance aspects of the facilities they oversee, they have not changed their practices towards animal welfare, but still only ensuring business practices do not result in animal cruelty. I never found evidence that their focus was focused on the overall wellbeing of the animals' for which they are responsible. Every interviewee noted regular inspections and relationship with their inspector, but noted how focused the APHIS inspectors were on records and specific details, not animal welfare outcomes. So, I agree with the recommendations of both Jenks (2009) and Snyder (2009) that oversight and enforcement responsibilities of animal protection legislation should be transferred to the DOI.

While both writers have a slightly different solution for how oversight of animal protection legislation should be split up within the Department of the Interior itself, they both

make strong arguments for why this department would ensure all animals are protected. Snyder (2009) writes, "[U]nlike the Department of Agriculture, the Department of the Interior has a mission to protect resources, rather than determine the best way to utilize them for greatest economic benefit. Thus, the Department of the Interior would not have any conflicts of interest in enforcing regulations that protect animals used in economic enterprises" (p. 163). Similarly, Jenks (2009), "Any law regarding captive exhibited animals can be enforced by the USFWS through the Department of the Interior, like the ESA, instead of the USDA." (p. 1126). While I agree with both scholars the oversight of animal protection should be moved to the DOI, I believe that establishing a Division of Animal Welfare under the DOI would be better, separate from the USFWS. Separating the enforcement of the ESA and new animal welfare legislation within the DOI, will help the USFWS work more closely with animal exhibitors in their conservation efforts without overloading the USFWS with larger animal welfare responsibilities. Additionally, Snyder (2009) advocates for oversight committees under the new Division of Animal Welfare to investigate any person, institution, or corporation that hopes to be licensed, with the committee made up of people unaffiliated with the organization and no less than two veterinarians. This will closely mirror the makeup of the AZA's and ZAA's oversight committees.

With new licensing and oversight responsibilities moved to the DOI, I would advocate for specific licensing requirements and inspection protocol changes. It was clear through the comparative analysis that the AZA and ZAA expect all aspects of a zoo's business and animal welfare practices to be presented to them before accreditation, and I believe that a new US licensing agency should require more information upfront from a zoo besides simply a tax form and one page application. Documentation of animal enrichment plans, veterinary facilities and

programs guided by the AAZV, detailed information regarding financial capabilities for continued operation, and evidence of knowledgeable staff should be required along with photos showing both outdoor and indoor animal facilities. Additionally, before a license is renewed, inspectors should conduct a detailed background check to ensure a history of compliance. Just like the AZA and ZAA, a full re-license application and inspection should be conducted before the licensing period ends.

In terms of the inspection process itself, I agree with Jenks (2019) that the inspector to facility ratio should be increased, as there are currently fewer than 200 inspectors. It would be ideal to follow the AZA inspection protocols of roughly three inspectors, each with knowledge or experience surrounding facility operations, husbandry and animal management, and veterinary medicine. Currently, the APHIS inspectors do a good job of building relationships with the zoos they oversee and maintaining strong oversight of records, but hopefully with enforcement protocols under the direction of the DOI the focus of the inspections could be equally on the evaluation of the animals themselves.

After the inspection process, enforcement protocols should change to limit the number of noncompliance warnings a zoo can receive before stricter enforcement measures are imposed. As zoos care for a variety of protected species and live animals, allowing facilities to stack up multiple violations at the suffering of the animals is unacceptable. The governing agency should clearly establish a specific number of violations allowed before a monetary penalty is imposed or an investigation opened. Each violation should result in direct proof of changes, such as how the AZA requires documentation within a certain time frame. Lastly, as was the concern of Jodidio (2020), a policy should be established in advance where confiscated zoo animals will be taken after a zoo is shut down. All of these changes and extra measures of accountability will hopefully

put an end to roadside zoos continuing their poor practices under the protection of a government license.

The policy changes I advocate for are extensive but necessary. Based on what I have learned from analyzing the literature and conducting interviews and a comparative analysis of USDA, AZA, and ZAA policies, I think the best policy solutions for the better care and oversight of zoo animals is through establishment of new legislation specifically for exhibitors and their animals and placing sole enforcement of protective animal legislation under the DOI. It was important to hear from interviewees that the AWA's current regulations and standards are minimal and not focused on modern animal welfare practices, as that pushed my decision to advocate for new policies. There is a current push for this change, and more than enough examples through both the AZA and ZAA for the US to establish a more modern framework for exotic animal care. The DOI seems more fit to enforce animal care measures as the agency itself is committed to protecting resources and would hold zoos to the expectation of fully caring for their wildlife. Through these major changes all zoos will be expected to fulfill modern animal welfare practices and the public will be able to trust zoos licensed by the US treat their animals with respect.

Chapter 8: Conclusion

Zoos have been and are still a huge part of US culture and the economy. Today zoos should provide more than simple entertainment for visitors; instead they should actively engage in meaningful animal welfare improvements and wildlife conservation efforts. The passage of the Animal Welfare Act in 1966 and the subsequent changes over the past decades was a huge step for the US government to intervene on behalf of animals used in research, exhibition, and breeding; however, the lack of improvements, especially for exotic animals exhibited in our nation's zoos, has been a failure of the US. The extreme differences between some of the top accredited zoos to the lowest roadside zoos undermines the quality animal care and educational opportunities that zoos have to offer.

Though my research into the many acts, laws, and governing policies was extensive, future research should address some limitations of it. In my comparative analysis, I was unable to locate some information mentioned on websites or in standard handbooks, specifically for the ZAA, that would have provided a more in-depth understanding of guidelines and regulations. Additionally, while the staff I interviewed worked in zoos of varied sizes and in different roles within the zoo, I did not speak to people at zoos that might fit the definition of a roadside zoo or a zoo that engages in questionable animal care activities. The perspective of those zoos would have been beneficial. Also, most of my interviewees were from accredited zoos which led to a certain level of bias as they spoke about the AWA's care standards and the details of accreditation versus licensing inspections.

Overall, through a review of the literature, conducting interviews, and comparing the licensing and accreditation standards, this study confirms many scholars' arguments that the USDA's zoo licensing and oversight standards are too low and the Animal Welfare Act outdated, thus allowing for both inadequate animal care and for owners to escape real punishment for violating policies and regulations. From those points, I argued that I believe the US should strive to promote a true focus on animal welfare through legislative measures, thus it should move away from minimum standards within a regulatory framework for animal care to expecting animal exhibitors to put the welfare of their animals above narrow self-interest. While the two zoo accrediting organizations, the AZA and ZAA, have substantially higher regulations and standards, the US should first and foremost address its lacking care standards and enforcement policies. Therefore, I recommend passing new legislation specifically for exhibitors and their animals, separate from other types of animal businesses, for animal care standards and placing sole enforcement of protective animal legislation under the Department of the Interior, with specific licensing and inspection changes to increase direct oversight and enforcement in zoos. In the end, the federal government has the sole power to ensure that animal welfare legislation in this country is not stagnant, but instead constantly improving to ensure that respect and care for wildlife is a priority and that substandard roadside zoos become a thing of the past.

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