THE U.S. ENDANGERED SPECIES ACT AND AGENCY DISCRETION: THE ROLE OF PUBLIC COMMENTING DURING THE RULEMAKING PROCESS

by

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DEDICATION

For my family - my husband George, my two sons, Rob and Eric, and my 4-legged best buddy, Clyde. George, Rob, & Eric, I never would have made it through this wild academic ride without your love, support, and understanding. Love you. Clyde, thanks for always reminding me to make time for the important things in life, i.e., a good long "sniff" walk with you. Love you too, puppy dog. For my parents - Harry and Ann, who instilled a love of knowledge and who always encouraged me to reach for the stars; and for my big sister - Kathy, who I knew was always there for me. I know the three of you are looking down and celebrating this accomplishment with me. I love and miss you every day. And for Dr. Freemuth – who always believed in me. As one of your last PhD students, I hope I made you proud.

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ABSTRACT

The most recent International Union for Conservation of Nature (IUCN) Red List classifies 40,084 out of the 142,577 evaluated species as threatened with extinction, with 1,962 of those species identified in the United States. The U.S. Endangered Species Act (ESA) was enacted in 1973 to protect and recover threatened and endangered species from extinction. The ESA federal listing process can be lengthy and arduous, taking years for a species to be proposed for listing. During the process the U.S. Fish and Wildlife Service (FWS) seeks comments from the public and peer reviewers on the proposed rule. Previous research debates the effectiveness of these public comments on the final rule. This dissertation examines the commenting influence on the FWS decision-making during the Director Dan Ashes tenure to examine the FWS's use of agency discretion during listing determinations. The qualitative study coded 1,053 narrative comments and the FWS response 11 listing rulemakings. Results showed that 50% of the commenting was science-related, with 34% directed at the underlying science of the proposed listing and 16% providing new or additional species information. The FWS was found to be more responsive to new and additional species information commenting than underlying science commenting. Although ESA statute forbids consideration of economics during a listing determination, almost 23% of the issues raised by commenters were economic related. Critical habitat, however, was only viewed as an issue in 2% of the comments. These findings can inform species conservation efforts and assist natural resource managers.

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LIST OF ABBREVIATIONS

ACFR	The Administrative Committee of the Federal Register
APA	The Administrative Procedure Act
BFS	Branch of Foreign Service
CBD	Center for Biological Diversity
CFR	Code of Federal Regulations
CITES	Convention on International Trade of Endangered Species of Wild Fauna and Flora
CoP	Conference of the Parties
CRS	Congressional Research Service
DPS	Distinct Population Segment
ECOS	U.S. Fish & Wildlife Environmental Conservation Online System
EIS	Environmental Impact Statement
E.O.	Executive Order
ESA	Endangered Species Act 1973
FR	Federal Register
FRA	Federal Register Act of 1935
FWS	U.S. Fish & Wildlife Service
GAO	Government Accountability Office
H.R.	House Resolution
IRB	Institutional Review Board

IUCN	International Union for Conservation of Nature
NGO	Nongovernmental Organization
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OMB	Office of Managemnt and Budget
RIN	Regulation Identification Number
Service	The U.S. Fish & Wildlife Service and the National Marine Fisheries Service
U.S.	United States of America
U.S.C.	United States Code
VDGIF	Virginia Departmemt of Game and Inland Fisheries

CHAPTER ONE: INTRODUCTION

Biodiversity is important to the well-being of human populations, playing both a key role in maintaining ecosystems and also being intrinsic to human experience (Diaz et al., 2006). Despite the 2002 commitments from world leaders to significantly reduce the rate of biodiversity loss as part of the United Nations Millennium Development Goals, biodiversity has continued to decline (Butchart et al., 2010; Ceballos et al., 2015; United Nations, 2019, May 9). Increasingly more species are facing threats of extinction due to growing population pressures, critical habitat loss, and climate change (Fischer & Lindenmayer, 2007; Keith et al., 2008; McKee et al., 2003; Pimm et al., 2014; Stuart et al., 2004; Thomas et al., 2004).

Efforts to address species loss is not new. As early as the 17th century, the Massachusetts Bay Colony in what is now called the United States (U.S.) adopted a closed season on deer in 1693 (Goble, 2006). In 1900, out of the growing awareness of increasing threats to species survival in the U.S., the Lacy Act was passed, signifying the first federal legislative action to protect wildlife. Other legislature followed to protect imperiled species. Those actions, however, were regarded by some as uncoordinated and piecemeal until the passage of the Endangered Species Act (ESA) which was seen as taking a much more systematic approach to the problem than the previous legislative efforts (Barrow, Jr., 2009).

In 1973 the United States Congress enacted the Endangered Species Act (ESA) (16 U.S.C. 1531 et seq.) to protect and recover species threatened with or endangered by

extinction and the ecosystems upon which those species depend (U.S. Fish & Wildlife, 2022b). The U.S. Supreme Court described the ESA as the "most comprehensive legislation for the preservation of endangered species enacted by any nation" (*TVA v Hill*, 437 U.S. 153, 1978). While widely regarded as one of our most comprehensive environmental laws, the ESA is also viewed as the most contentious and controversial environmental law (Andrews, 1999; Bean, 2009; Brown, Jr. & Shogren, 1998; Lowell & Kelly, 2016; Schwartz, 2008). The number of species listed under the ESA continues to grow. As of April 2022, U.S. Fish & Wildlife Environmental Conservation Online System (ECOS) (U.S. Fish & Wildlife Service ECOS Environmental Conservation Online System, 2022a) reports 2,366 listings under the ESA: 1,869 endangered and 497 threatened.

The process of listing a species as endangered or threatened under the Endangered Species Act is accomplished through federal rulemaking. Federal rulemaking is the process through which federal agencies develop, amend, or repeal rules (Lubbers, 2012; Warren, 2011). The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) are the two federal agencies charged with the listing and implementation of the Endangered Species Act (U.S. Fish & Wildlife Service, 2022b). While there are two agencies, the FWS manages more than 15 times as many listed species than the NMFS (Lowell & Kelly, 2016; Parenteau, 2005).

Federal agencies, including the FWS, are delegated rulemaking powers by congressionally enacted agency-authorizing statues, such as the ESA (Lubbers, 2012; Warren, 2011). Congress also delegates agency discretionary authority in conjunction with those agency rulemaking powers. In the Public Administrative (PA) literature,

administrative discretion, such as exercised by the FWS when making listing determinations, is considered an extension of the fundamental PA concept of accountability (Mulgan, 2000). Scholars Pressman and Wildasky (1984) argued that the use of discretion is both inevitable and necessary and is only controlled indirectly. Layzer (2012a), an environmental policy and politics scholar, stressed the critical role of the agency administrator in choosing the foundational science models and projections used in environmental rulemaking. The FWS exercises its agency discretion when choosing the scientific data and information underpinning a listing decision, when soliciting peer reviewers, and when deciding which of the publicly submitted comments to give weight to in the final decision-making process on whether or not to finalize a proposed listing rule (Lowell & Kelly, 2016; Puckett et al., 2016; Wymyslo, 2009). The questioning of how an agency uses its discretionary powers is often central to litigation seeking to vacate a disputed agency rulemaking (Warren, 2011). Since the enactment of the ESA, the FWS and NMFS have been litigated over their use of broad discretionary powers when making listing determinations, often with respect to the best available science mandate of the ESA (Doremus, 2006; Holland, 2008; Jesup, 2013, Murphy & Weiland, 2016; Puckett et al., 2016).

The listing rulemaking process can sometimes be lengthy and arduous, proving detrimental to the survival of that species (Suckling et al., 2004). A recent study looked at the amount of time 1,338 listed species spent in review from 1973 – 2014 and found the median time for a species to receive protection was 12.1 years, with plants and invertebrates having longer wait times than vertebrates (Puckett et al., 2016). If the listing process is initiated through the submission of a petition for listing by a third party, the

"non-discretionary" pathway, the maximum listing timeline should be just over two years due to the ESA statutory deadlines in place. If the FWS initiates the listing as a candidate through the "discretionary" pathway, there are no time limits in place prior to a proposed listing rule being published, which then kicks in the one-year ESA statutory deadline for finalization or withdrawal of the proposed rule. Greenwald et al. (2006) reported that without litigation, the average time for FWS to propose a listing initiated through the discretionary pathway was 7.1 years.

Despite these often lengthy and potentially extirpative listing delays, an exhaustive search of both the federal rulemaking literature and the Endangered Species Act (ESA) literature found few studies examining the species listing rulemaking process. As part of that process, the FWS solicits public commenting during the notice and comment stage for the proposed listing. While the Administrative Procedure Act (APA) of 1946 requires federal agencies to consider issues raised by commenters, the APA does not require the agencies to act on those issues, thereby allowing the use of agency discretion by the agencies. There were no studies found specifically investigating the influence of commenting on the FWS's use of agency discretion during listing determinations. Due to the complexity of rulemaking and the discretionary authority granted agencies when rulemaking, the federal rulemaking process is a critical venue for public policy decision-making and thus worthy of scholarly scrutiny (Warren, 2011; West, 2005). This dissertation seeks to fill the identified knowledge gap by answering the research question, *which types of issues raised by commenters during the notice and comment stage can best influence the FWS's use of agency discretion during listing determinations?* The study explores the use of agency discretion by the FWS in response

to issues raised by commenters for 11 listing rulemakings through an administrative law lens.

This dissertation is organized into eight chapters, including this introduction. Chapter 2 provides requisite background information for this dissertation. The chapter first offers an historical look at species imperilment in the U.S., offering a timeline of key events precipitating a growing public awareness of the jeopardy facing species and early legislative actions taken to address the issue. The Endangered Species Preservation Act (ESPA) and Endangered Species Conservation Act (ESCA) are briefly summarized before the discussion turns to the Endangered Species Act (ESA). It focuses on Section 4 which sets forth the procedure for listing a species. And overview of the major amendments to the ESA since it was enacted in 1973 is then offered to familiarize the reader with the current amended version of the Act. The chapter concludes with an overview of how the general federal rulemaking process works before then detailing the specific rulemaking process followed by the FWS to list a species as endangered or threatened under the ESA.

Chapter 3 discusses agency discretion, exploring its foundations in the Public Administration (PA) literature and its importance in the federal rulemaking process. The use and misuse of agency discretion is often at the center of ESA rulemaking litigation. Executive, Legislative, and Judicial oversight of the federal rulemaking process and federal agency use of discretion is also discussed.

Chapter 4 examines the existing literature on the rulemaking process to provide a comprehensive review of the scholarship looking at factors which impact the rulemaking

process. A review of the limited ESA literature specifically examining the listing rulemaking process is also offered.

Chapter 5 provides a description of the research design and methodology used in this study. The methodology used for this study builds upon the foundational political science methodological approaches of Golden (1998), and subsequently Kamienieki (2006a, b), and draws upon the methodology used by Magat et al. (1986); Nixon et al. (2002); Shapiro (2013), and Wagner et al. (2011). The chapter discusses the steps used to select the 11 listing rulemakings analyzed for the study to explore the influence of commenting on the FWS's use of discretion during listing determinations.

Chapter 6 details the analysis used to investigate the influence of submitted comments on the FWS when decision-making for listing determinations and reports the results of the study. The concept of influence is operationalized by coding the FWS responses to issues raised by commenters, as done in previous studies (Magat et al., 1986; Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011). This chapter highlights key results found in the data.

Chapter 7, the discussion, will interpret the results of the study, comparing the cumulative results of the study with previous studies. The implications of those findings are then discussed, focusing on what these findings could mean for future species listing rulemakings as well as the rulemaking process as a whole. Findings from the individual rulemakings which give greater insight or clarification into the FWS's use of discretion are also considered. The chapter then concludes by taking a look at the limitations of the study.

Chapter 8 concludes the dissertation with a brief overview of the study and a summary review of the key findings and their implications. The limitations of the study are noted and the chapter ends with a discussion of future research avenues to pursue to gain further insight into the rulemaking process to list species under the Endangered Species Act.

This study broadens the focus of the current ESA scholarship by looking specifically at the ESA rulemaking process and identifying factors found to influence the process. The research also expands the federal rulemaking scholarship by examining the notice and comment stage of the FWS listing rulemaking process, offering a different perspective on that stage of the federal rulemaking then found in the existing literature. The study also contributes to the current Public Administration literature by adding to the agency discretion scholarship through the exploration of how FWS uses agency discretion during its listing determinations. And finally, this researcher hopes to contribute to the ongoing efforts to protect endangered species by better informing the public on how they can best influence the FWS decision-making process to list endangered and threatened species.

CHAPTER TWO: BACKGROUND

I. Introduction

In 1973, Congress enacted the Endangered Species Act (ESA) to "provide a means by whereby the ecosystems upon which endangered species and threatened species depend may be conserved" (ESA, 16 U.S.C. §1531 et seq, Sec. 2(b)). The Act emerged from the inadequacy of existing Federal law to preserve at-risk species (Scott, Goble, & Davis, 2006). According to the most recent International Union for Conservation of Nature (IUCN) Red List, 40,084 out of the 142,577 evaluated species globally are classified as threatened with extinction (IUCN, 2022).[1] The IUCN has identified 1,962 species as threatened with extinction in the United States (IUCN, 2022). The two federal agencies tasked with implementing and enforcing the ESA are the United States Fish and Wildlife Service (FWS) of the Department of the Interior (DOI) and the National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Agency (NOAA) of the Department of Commerce (DOC).

This chapter first looks at the early growing awareness of species imperilment in the United States, offering a timeline and a brief overview of the acknowledgment of species endangerment and extinction and the legislative efforts taken to address the issue. The Endangered Species Act (ESA) is then discussed, providing a brief history of the

[1] Threatened species are those listed as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU). The IUCN Red List assessment methodology can be found at http://www.iucnredlist.org/technical-documents/assessment-process.

Act's enactment, an overview of Section 4 which establishes the procedure for listing a species, and ending with a summary of the major amendments to the ESA since its passage in 1973. The chapter concludes with an overview of how the general federal rulemaking process works before then detailing the specific rulemaking process followed by the FWS to list a species as endangered or threatened under the ESA.

II. Species Imperilment and the Early Legislative Actions

To fully comprehend the importance of the Endangered Species Act (ESA) for the survival and recovery of species, one needs to have a working knowledge of the roots of the Act, and how the ESA came to be enacted. This section first traces the dawning awareness of species imperilment in the United States (U.S.). Key legislative efforts to address the growing problem are then discussed, including the Lacey Act of 1900, the U.S. Migratory Bird Treaty of 1918, and the two precursors to the ESA, the Endangered Species Preservation Act of 1966 and the Endangered Species Conservation Act of 1969.

a. Species Imperilment in the United States

Coming from countries where the nobility and royalty owned the wildlife and hunting was routinely excluded from the general public, the abundance of wildlife was one of the most appealing attributes to colonists arriving in the New World (Hays, 2000). Early colonists believed that the environment existed solely for their benefit and would continue to grow to meet their needs, i.e., the distinctive American nineteenth century "cornucopian" view (Andrews, 1999; Kline, 2011). This perception changed, however, during the late 17th century with a dawning awareness that wildlife might not be as inexhaustible as was originally thought. This realization led to the Massachusetts Bay Colony adopting a closed season on deer in 1963 (Goble, 2006). Other protective actions

were also taken to address species imperilment (See Figure 2.1). The fish-passage laws of the eighteenth century signified an early example of critical habitat protection legislation, addressing conflict between property owners' land use and public interest in protecting wildlife habitat (Hart, 2004).[2] By 1791, nine states had enacted laws requiring mill owners to modify dams which restricted the passage of fish; and by 1800, thirteen states had laws prohibiting mill dams to obstruct the passage of migratory fish (Hart, 2004).

Intense hunting pressure by the 1800s led to the realization that wildlife, as a public resource, required public attention (Czech & Krausman, 2001; Hays, 2000). The near extinction of the bison by the 1890s and the loss of the last passenger pigeon in the wild in 1900 brought sudden public and political awareness that numerous terrestrial species were endangered (Rocheleau, 2017). State governments established hunting seasons with licensing requirements and hunting quotas in an effort to maintain and restore game populations (Hays, 2000). Publicly owned habitat for game animals, such as wildlife refuges and public game lands, was established. And in 1940, the U.S Bureau of Fisheries and the Bureau of Biological Survey within the Department of the Interior were combined to create the U.S. Fish and Wildlife Service (FWS) (Congressional Research Service, 2018, July 20).

In 1903 President Theodore Roosevelt undertook the conservation measure of creating the first national wildlife refuge at Pelican Island, Florida, to help stop the decline of several bird species (Soll, 2014). The enormous demand for feathers to adorn women's hats by the millenary industry had sparked the rampant killing and poaching of

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[2] In the eighteenth century, fisherman concerned about mill dams preventing migratory fish from reaching their spawning sites upstream sought legislative relief. Fish-passage laws required mill dam owners to modify dams to allow fish passage upstream through dam gates, openings, or slopes (Hart, 2004).

birds for their plumage. The Pelican Island refuge marked the first time the Federal government had acted aggressively to protect bird, fish, and wildlife habitat (Soll, 2014).

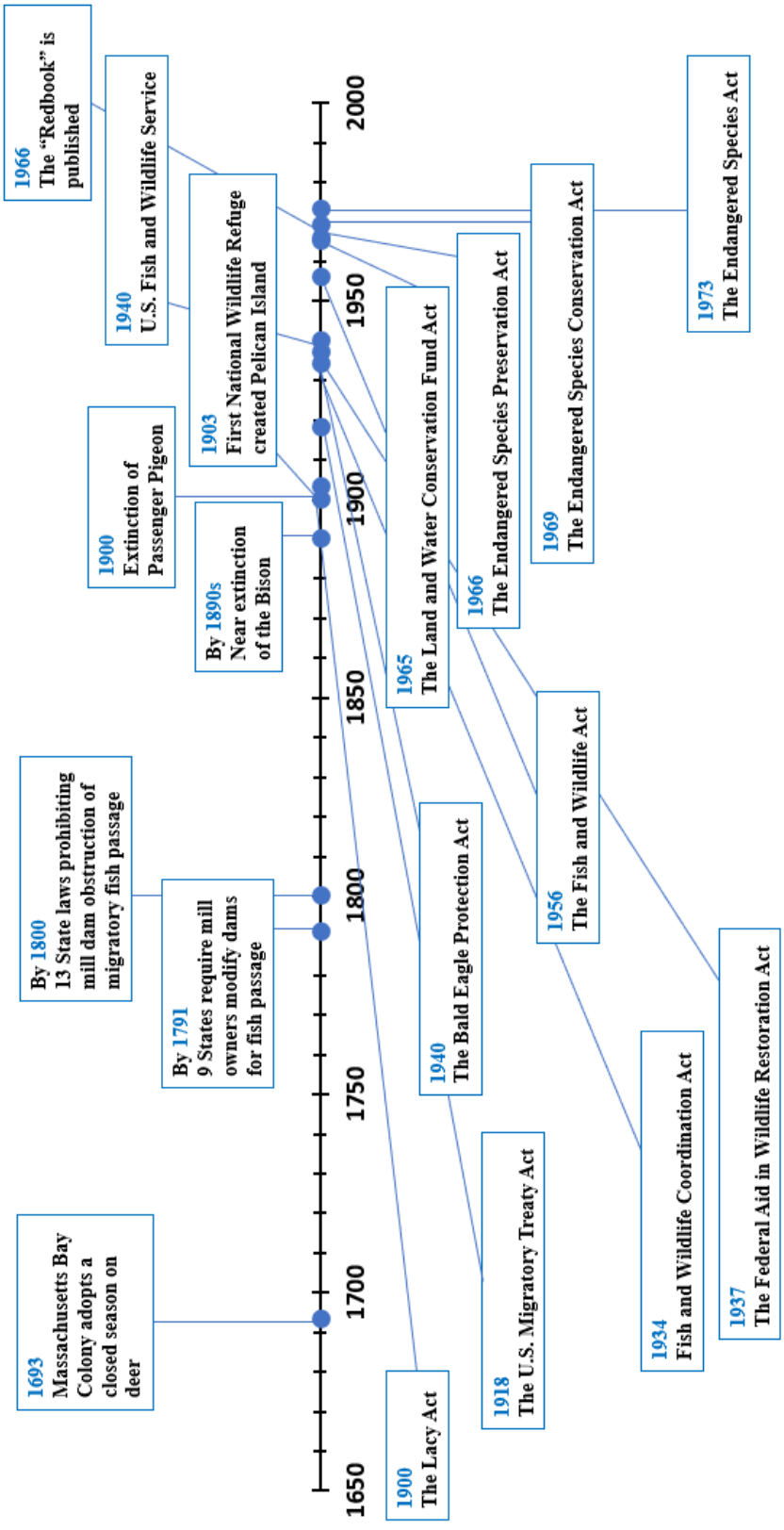

Figure 2.1 Timeline of Actions Taken to Address Species Imperilment

b. Early Federal Legislative Action to Address Threats to Species

In 1900, the first federal legislative action was taken in response to the growing awareness of increasing threats to species survival in the U.S. Table 2.1 highlights early legislation enacted prior to the two precursors of the ESA: the Endangered Species Preservation Act (ESPA) of 1966 and the Endangered Species Conservation Act (ESCA) of 1969.

Table 2.1 Early Federal Legislation to Address Species Threats

Federal Legislation	Legal Action
Lacey Act of 1900 (16 U.S.C. §§3371-3378)	The Act makes it a federal crime to move, trade, acquire, purchase, or sell any wildlife, fish, or plants, illegally obtained through the breaking of state, tribe, or foreign country wildlife laws, across U.S. State borders or interstate or internationally
The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §§703-712)	The MBTA implements four international conservation treaties entered into with Canada, Mexico, Japan, and Russia which prohibit the hunting, killing, capturing, possession, sale, transportation, and exportation of migratory birds (alive or dead), and provides full protection to any bird parts, including feathers, eggs, and nests
The Fish and Wildlife Coordination Act (FWCA) of 1934 (16 U.S.C. 661-667e)	The FWCA required wildlife conservation receive equal consideration and be coordinated with water resource development programs but gave agencies complete authority over which, if any, mitigation measures were actually incorporated into a project plan to mitigate damage to wildlife resources
The Federal Aid in Wildlife Restoration Act of 1937 (16 U.S.C. §§669-669i; 50 Stat. 917) (Also known as the Pittman-Robertson Act)	The FAWR provided federal funding to state wildlife agencies to manage and restore wildlife and their habitats, through excise taxes on arms and ammunition
The Bald Eagle Protection Act (BEPA) of 1937 (16 U.S.C. 668a-d) (Became the Bald and Golden Eagle Protection Act in 1962)	The BEPA became the first law to prohibit the take of an imperiled species, in an attempt to protect the U.S. national symbol, the Bald Eagle, from extinction
The Fish and Wildlife Act of 1965 (16 U.S.C. §742a-742j, not including 742d-l; 70 Stat. 1119)	The FWA establishes a comprehensive national fish, shellfish, and wildlife resources policy with emphasis on the commercial fishing industry but also with discretion to administer the Act with regard to the inherent right of every

	citizen and resident to fish for pleasure, enjoyment, and betterment and to maintain and increase public opportunities for recreational use of fish and wildlife resources
The Land and Water Conservation Fund Act (LWCF) of 1965 (16 U.S.C. §§4601-4 through 4601-11)	The LWCF allows federal funds to be used to acquire land for the preservation of fish and wildlife under threat of extinction

The Lacey Act of 1900 (see Table 2.1) was the first federal law to protect wildlife in the U.S. It provided the federal government its first direct and nationwide jurisdiction to address species extinction (Cahn & Mac, 2014; Congressional Research Service, 2014, January 14; Czech & Krausman, 2001). While there was stiff opposition to the Lacey Act from those concerned about states' rights, the strong public support for bird protection outweighed the opposition. The amended Lacey Act of today is one of most comprehensive and potent weapons to combat the illegal wildlife trade (Anderson, 1995; Congressional Research Service, 2013, July 23).

The federal government assumed responsibility for a large portion of the wildlife jurisdiction in the U.S. with the enactment of the U.S. Migratory Bird Treaty Act (MBTA) (see Table 2.1) in 1918 to combat the widespread killing and poaching of birds (Czech & Krausman, 2001; Rozan, 2014; Soll, 2014). The MBTA is considered the United States' most important bird protection law, protecting nearly all of the country's native birds through its prohibiting of poaching and incidental take of migratory birds.

The Fish and Wildlife Coordination Act (FWCA) of 1934 (see Table 2.1) represented one of the earliest attempts at a consulting process with federal agencies. The FWCA, however, was viewed as ineffective and lacked judicial enforcement (Czech &

Krausman, 2001; Fish and Wildlife Coordination Act, 2018; Veiluva, 1981). An assessment of the FWCA in the early 1970s by Congress and members of the Executive Branch found that federal agencies often ignored or diminished the impacts on wildlife and had failed to adequately consult with FWS prior to water projects (Veiluva, 1981).

Concerned over the unprecedented declines of wildlife populations in the early 1900s, state wildlife agencies and various sportsman's groups urged Congress to pass the Federal Aid in Wildlife Restoration Act (FAWR) in 1937 to provide funding to restore wildlife populations and to acquire, develop, and manage their habitat (Czech & Krausman, 2001) (See Table 2.1). As a result of the passage of FAWR, Federal excise taxes were imposed on firearms and ammunition generating funding for the individual states to fund wildlife management and habitat protection (Czech & Krausman, 2001; Federal Aid in Wildlife Restoration Act, 2018). Today, FAWR continues to provide funding for state wildlife agencies, with seventy-five percent of the budget for wildlife agencies in the U.S. coming from licensing fees for hunters and anglers, and from excise taxes on hunting and fishing equipment (Heffelfinger et al., 2013).

The enactment of the Bald Eagle Protection Act (BEPA) (see Table 2.1) in 1940 established the first law to prohibit the take of an imperiled species. The law was passed in an attempt to protect the U.S. national symbol, the bald eagle, (*Haliaeetus leucocephalus*), from extinction (Czech & Krausman, 2001; Iraola, 2005).[3] The bald eagle was adopted as the national symbol by the Continental Congress in 1782 (Iraola,

[3] "Take" includes "pursue, shoot, shoot at, poison, wound, kill, capture, collect, molest or disturb" a species (United States Department of Justice, 2022)

2005). This was amended to include the Golden Eagle in 1962, becoming the Bald and Golden Eagle Protection Act (BGEPA) (Michigan State University, 2022).

The Bureau of Commercial Fisheries (BCF) and the Bureau of Sport Fisheries and Wildlife (BSFW) were created within the U.S. Fish and Wildlife Service by the Fish and Wildlife Act (FWA) of 1956 (see Table 2.1) (Congressional Research Service, 2018, July 20). In 1970, the BCF was transferred to the Department of Commerce and renamed the National Marine Fisheries Services (NMFS); and in 1974, the BSFW was renamed the U.S. Fish and Wildlife Service (FWS). NMFS and FWS, as previously mentioned, are charged with implementing the ESA.

In 1964, as public concern for endangered wildlife grew, Congress added a provision to the Land and Water Conservation Fund Act (enacted in 1965) allowing federal funds to be used to acquire land for the preservation species under threat of extinction (Goble, 2006). Congress' action signified an important change on two fronts: 1) a change from just managing game species to preserving wildlife, and 2) a change to species protection through habitat preservation, rather than just protection through take regulation or through captivity in zoos. Also, in 1964, the Department of the Interior (DOI) appointed the Committee on Rare and Endangered Wildlife Species (CREW), which in 1966, published the *Rare and Endangered Fish and Wildlife of the United States* (Scott et al., 2006; Svancara et al., 2006). The "Redbook", as the book became known, was the first official listing of species at risk for extinction.[4] The Redbook listed 331 species, divided into three categories of concern: 130 rare and endangered species, 74

[4] The published book, *Rare and Endangered Fish and Wildlife of the United States*, became known as the "Redbook" because of its red book cover (Svancara et al., 2006).

peripheral species, and 127 species of undetermined status. While the Redbook was devoid of legal force, it did, however, elicit public attention to the risk of species extinction (Goble, 2006). The next section looks precursors to the ESA.

c. Precursors to the Endangered Species Act: the ESPA and the ESCA.

Congress enacted the Endangered Species Preservation Act (ESPA) in 1966 in response to the increasing public awareness and concern about endangered wildlife. The Act sought to protect animals native to the United States that were under threat and to compile a list of endangered species (Jinnah & Lee, 2014). Under the ESPA, native species were able to be listed as endangered to give the species limited protection and a mechanism was established to acquire land as habitat for endangered species (Czech & Krausman, 2001; U.S. Fish & Wildlife, 2022a). The Secretary of the Interior was required to publish a formal list of native fish and wildlife species considered to be endangered (Goble, 2006). The use of biological factors and expert opinion in identifying species for listing was emphasized (Endangered Species Preservation Act of 1966), a directive later used in the current version of the Endangered Species Act of 1973. In 1967 then Secretary of the Interior, Stewart Udall, officially listed 78 native species as endangered (fourteen mammals, thirty-six birds, three reptiles, three amphibians, and twenty-two fish) (Wilcove & McMillan, 2006). The "Class of 67" list included the bald eagle, (*Haliaeetus leucocephalus*), but not any invertebrates or plants. The ESPA also did not include a specific provision indicating that subspecies or populations could also receive protection under the Act (Gleaves et al., 1992).

The ESPA differed from earlier species protection legislation by calling for a comprehensive program rather than a species-by-species approach (Yaffee, 1982).

Habitat was the focus of the Act, but federal agencies were directed to protect habitat for endangered vertebrate species only when practicable and aligned with agency mission (Czech & Krausman, 2001; Scott et al., 2006). The ESPA established refuges for the conservation of endangered species and prohibited the taking of the endangered species within the refuges. Of note, the impact of other takings outside of wildlife refuges and from commercial activities was ignored by ESPA (Scott et al., 2006). The ESPA did not address the commerce in endangered species and parts or the detrimental impact of the American market on extinction elsewhere in the world. Federal agencies' activities that might threaten species were also not limited (Barrow, Jr., 2009).

In December of 1969, Congress amended the ESPA to address some of its shortcomings and renamed it the Endangered Species Conservation Act (ESCA). The ESCA sought to rectify the ESPA's failures by providing protections for invertebrates and plants, confronting the impact of commercial activities and takings on wildlife populations, and addressing the international aspect of extinctions (Goble, 2006). The ESCA expanded protections to additional endangered species and subspecies, including invertebrates, around the world, and emphasized the regulation of interstate and foreign commerce of identified endangered species (Jinnah & Lee, 2014; Scott et al., 2006; Yaffee, 1982). Plants, however, would not receive protections until the ESA was enacted in 1973 (Jinnah & Lee, 2014). The Secretary of the Interior to use the "best available scientific data" when making decisions regarding species endangerment and or when prohibiting the importation and subsequent sale in the U.S. of species in danger of "worldwide extinction" (Czech & Krausman, 2001; The Endangered Species Conservation Act of 1969).

In a Special Message to Congress in 1972, President Nixon declared that the most recent legislation action to protect endangered species "simply does not provide the kind of management tools needed to act early enough to save a vanishing species (Nixon, 1972; lines 316-317). In outlining his 1972 environmental program, Nixon proposed new legislation to: 1) "provide early identification and protection of endangered species" (line 319); and 2) "make the taking of endangered species a federal offense" (line 320). He further proposed to "permit protective measures to be undertaken before a species is so depleted that regeneration is difficult or impossible" (lines 320-321).

In February of 1973, under the ESCA, Congress directed the Secretary of the Interior and the Secretary of State to convene an international meeting to adopt a convention to conserve endangered species (Congressional Review Service, 2018, July 20; Czech & Krausman, 2001; Scott et al., 2006). The international meeting held in Washington, D.C. culminated in the signing of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) by eighty nations on March 3, 1973 (Balistrieri, 1993).[5] The signing of CITES put pressure on the U.S. to set an example by enacting strong domestic legislation to protect imperiled species and to establish implementing procedures and authority for CITES domestically (Yaffee, 1982). Just over nine months after the signing of CITES, the Endangered Species Act (ESA) was signed into law on December 28, 1973, in response to President Nixon's call to Congress

[5] CITES was ratified by the U.S. Senate on July 1, 1975, creating a vehicle to regulate international commerce of imperiled species designated for protections and establishing an international export/import permitting system and creating a three-tier listing structure based on varying degrees of endangerment (Czech & Krausman, 2001; Scott et al., 2006).

for a more comprehensive legislation to protect species-at risk (Congressional Review Service, 2018, July 20; Gleaves et al., 1992; Yaffee, 1982).

III. The Endangered Species Act (ESA) of 1973

Congress enacted the Endangered Species Act (ESA) "to provide a means by whereby the ecosystems upon which endangered species and threatened species depend may be conserved" (United States Department of Justice, 2022). The bill passed the Senate in July 1973 unanimously, by a vote of 92 – 0, and was adopted by the House on December 20, 1973 nearly unanimously, by a vote of 355 – 4. Nixon signed the ESA into law on December 28, 1973 (Barrow, Jr., 2009; Scott et al., 2006; Yaffee, 1982). Contrary to how contentious and controversial the ESA is today, at that point in time, it was considered among the least controversial bills enacted in 1973, despite its being an extremely strong, comprehensive, and prohibitive law (Scott et al., 2006; Yaffee, 1982).

While the previous legislative actions to protect imperiled species were regarded by some as uncoordinated, piecemeal, ad-hoc; the ESA of 1973 was considered much more systematic in its approach (Barrow, Jr., 2009). The initial version of the ESA required the Secretary of the Interior to establish and maintain a list of species, subspecies, and/or isolated populations which were determined to be threatened or endangered (Barrow, Jr., 2009; Yaffee, 1982). Any natural or man-made reason for the decline of a species was covered under the Act's criteria of endangerment. Plants and all invertebrates were now also able to be listed under the ESA. As a result, any animal or plant was now eligible for ESA protection with the exception of insect pests, bacteria, and viruses. The Smithsonian was required to review the status of plant species to determine their eligibility for protections under the ESA (Barrow, Jr., 2009; Yaffee,

1982). The earlier broadly applied "take" prohibitions to all endangered animal species were now extended to threatened species (Congressional Review Service, 2018, July 20).[6] The import or export of an endangered or threatened species or product or part thereof was also prohibited.

At the core of the Endangered Species Act is Section 4 (16 U.S.C. §1533), "Determination of Endangered Species and Threatened Species". Section 4 establishes the procedure for the listing of endangered and threatened species and requires the concurrent designation of critical habitat for those listed species. The listing procedure set forth in Section 4 will be discussed in detail later in this chapter.

The ESA's implementation has been contentious and controversial throughout its history (Layzer, 2012a, b; Yaffee, 1982). As a result, the ESA has gone through a serious of amendments since its inception which has transformed the Act into a more flexible statute (Layzer, 2012a, b; Scott et al., 2006). The 1978 amendments marked the beginning of the change of ESA's prohibitive policy to a somewhat less restrictive one (Goble, 2006; Layzer, 2012b). The 1978 amendments focused primarily on procedures while retaining the initial structure of the ESA resulting in a much more complex law from a procedural standpoint (Scott et al., 2006). While the 1978 amendments sought more flexibility in the ESA, the second principal round of amendments, the 1982 amendments, addressed a concern about the level of discretion granted under the ESA (Scott et al., 2006). Congress amended Section 4 in the 1982 amendments to restrict the Secretary's discretion on listings by specifying that listing determinations are to be made

[6] In the first incarnation of the ESA in 1973, the term "take" was defined as "harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting organisms or *attempting* to do the same" (Yaffee, 1982, pp 56-57).

solely on the best scientific and commercial data available; in other words, economics was not to be considered (Goble, 2006; Shabecoff, 1981). The 1988 amendments addressed species that had been deemed recovered and then delisted and provided a means to list species in immediate jeopardy through emergency listing (Congressional Review Service, 2018, July 20). Table 2.2 provides a summary of some of the major amendments to the ESA since its enactment.

Table 2.2 Major Amendments Made to the 1973 Endangered Species Act

Year	Key Changes Made
1978	1) definition of species changed to include distinct population segments (DPS) of vertebrates 2) imposes 2-year limit on listing process; listings exceeding the time limit required to be withdrawn 3) requires critical habitat to be designated concurrently with listing, when prudent, and defines "critical habitat" as habitat essential for the conservation of the species, including habitat necessary for survival and also essential for recovery and delisting 4) empowerment of a cabinet-level Endangered Species Committee, the "God Squad"
1982	1) requires listing determinations to be made "solely on the best scientific data available", making clear economics are not to be considered 2) requires the determination of the status of a species to be completed within one year of the listing proposal, replacing the 2-year timeframe of the 1978 amendments, unless the proposed rule is withdrawn for cause or a 6-month extension is granted 3) adds two procedural pathways to list a species: discretionary and non-discretionary pathways 4) the new statute of "warranted but precluded" is added to the existing "warranted" and "not warranted" statuses for the listing process

1988	1) adds a new subsection to Section 4 which requires the monitoring of delisted species determined as recovered for a period of five years 2) requires the Secretary to monitor all petitioned species that are designated as "candidates" for listing 3) FWS may emergency list a species for 240 days, but must publish detailed reasons as to why the emergency listing is necessary and notify the states where the species is believed or known to occur 4) extends the protections for endangered plants under Section 9 of the Act

IV. The Listing Process of the Endangered Species Act

Species at risk for extinction in a significant portion of their range are eligible to be listed as endangered or threatened under the Endangered Species Act (ESA). This section looks at how species are listed under the ESA. First key terminology is defined. An overview of the federal rulemaking process is then provided prior to a detailed look at the FWS listing rulemaking process.

Section 3 of the Act defines key terms. An "endangered species" is defined as any species which is in danger of extinction throughout all or a significant portion of its range" (§1532(6)) and a "threatened species" is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (§1532(20)). The term "species" is defined as "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature" (§1532(16)).

Section 4 of the ESA establishes the requirements for listing a species as endangered or threatened (U.S. Fish & Wildlife Service; 2017a, 2017b). Occasionally, in addition to a listing rule, a 4(d) special rule, authorized by Section 10 of the Act, is also promulgated for a threatened species for more flexible management through additional provisions tailored to the specific conservation needs of that species (78 FR 11766, p. 11780). Special 4(d) rules supersede regular ESA protections for threatened species and the stipulated provisions in the special rule may be more or less restrictive than the general provisions of the threatened species listing rule.

a. Overview of the Federal Rulemaking Process

Before taking an in-depth look at the listing process, a cursory look at the general federal rulemaking process is prudent. Figure 2.1 provides an overview of the basic steps of the federal informal rulemaking process.

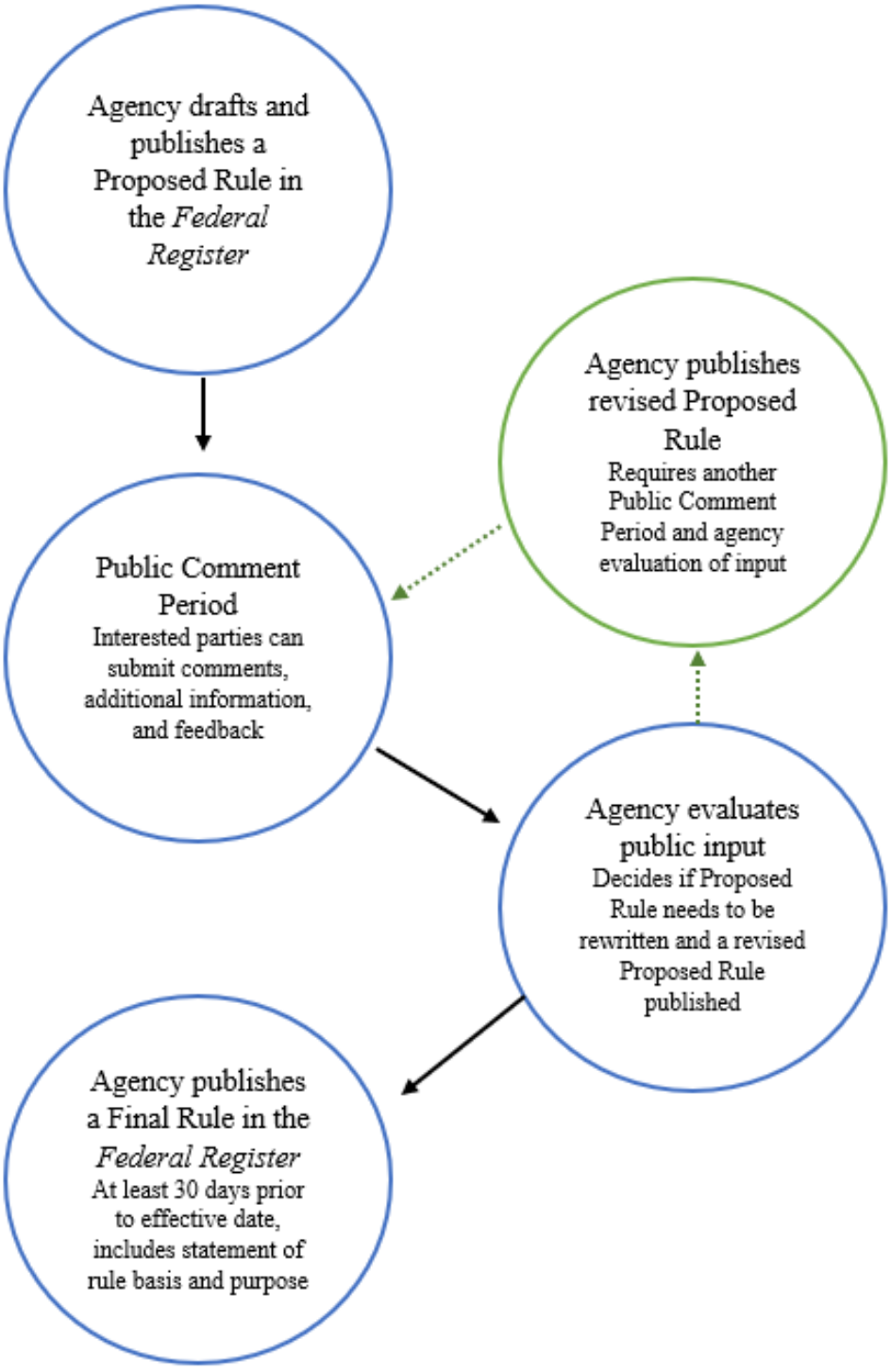

Figure 2.2 Federal Agency Informal Rulemaking Process[7]

[7] Source: Adapted from Warren (2011).

The informal federal rulemaking process is basically a two-step process (Naughton et al., 2009). During the first stage, referred to as the pre-proposal or rule development stage, agencies develop and shape their preliminary policy initiatives and draft a proposed rule. During the second stage, the notice and comment stage, agencies publish a proposed rule in the *Federal Register* and open a public commenting period for public review and scrutiny of the proposed rule. Following the notice and comment stage, the proposed rule can be promulgated to final rule, revised and published again with a re-opening of the public commenting; or in rare cases, withdrawn from the federal rulemaking process (Warren, 2011). The published final rule in the *Federal Register* includes a concise general statement of the basis and purpose of the rule and the rule's effective date. The published final action for a withdrawn proposed rule states the reason for the withdrawal.

b. The Federal Rulemaking Process to List Species under the Endangered Species Act

As stated previously, the ESA authorizes the U.S. Fish & Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) to implement the ESA (Andrews, 2014; Congressional Research Service, 2018, July 20). FWS is responsible for protecting land animals, plants, and freshwater fish while the NMFS is responsible for protecting marine species. The focus of this study is the federal rulemaking process used by the U.S. Fish and Wildlife Service to list species as endangered or threatened under the ESA (see Figure 2.3).

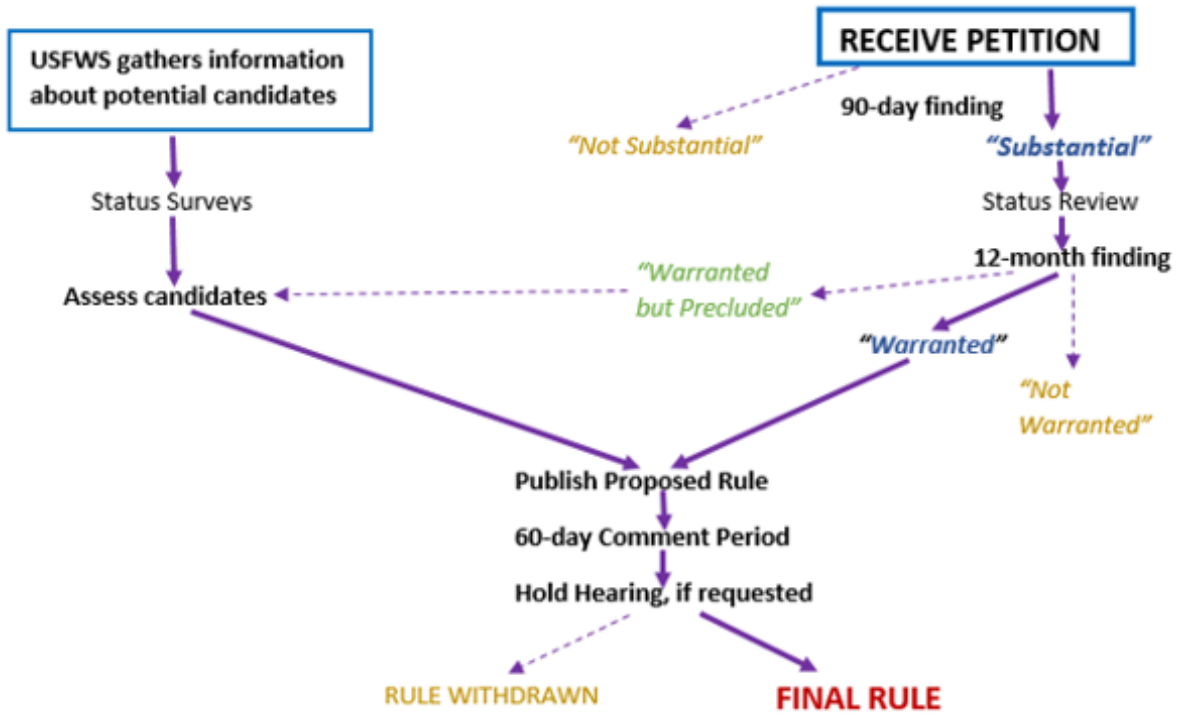

Figure 2.3 FWS Listing Process under the Endangered Species Act (ESA)[8]

The FWS lists a species as endangered or threatened under the ESA through one of two pathways (see Figure 2.3). The FWS, of its own discretionary volition, can initiate a status review of a particular species it identifies as a potential candidate for listing. This pathway, sometimes referred to as the "discretionary" pathway, is the pathway shown on the left side of the diagram. Following the identification of a potential candidate by FWS, a Notice of Review seeking biological information and public comment is published in the *Federal Register* and a status review of the species is undertaken (U.S. Fish & Wildlife Service, 2017e). Due to the number of candidates and time and resources constraints, FWS prioritize candidates for listing based on three criteria: 1) degree or magnitude of threat; 2) immediacy of threat; and 3) the taxonomic distinctiveness of the

[8] Source: Adapted from U.S. Fish & Wildlife Services (U.S. Fish & Wildlife Service, 2017b).

species; with degree or magnitude of threat being the highest criterion of the three (U.S. Fish & Wildlife Service, 2017c). If the FWS determines listing of the candidate is warranted by the species assessment process (see Appendix A), the FWS will publish a proposed rule to list the species in the *Federal Register*.

More often the listing process is initiated by a petition submitted by persons or nongovernment organizations (NGOs), as shown by the pathway on the right of the diagram (Foley et al., 2017; U.S. Fish & Wildlife Service, 2017b). This pathway is sometimes referred to as the "non-discretionary" pathway. As reported by Foley et al. (2017), the petition process is particularly important for the listing of foreign species, with more than one-third (39.6%) of all foreign listings originating from petitions from NGOs.

After receiving a petition to list a species, the FWS has ninety days to issue a "90-day finding" as to whether or not the petition presents "substantial scientific or commercial information" to indicate that federal protection for the species "may be warranted" (16 U.S.C. §1533(b)(3)(A)). If the 90-day finding declares that substantial information was presented by the petitioner, then the FWS conducts a status review of the species for a listing status determination. Within 12 months of issuing a 90-day finding, the FWS is required by statute to issue a "12-month finding" declaring either: 1) the listing is not warranted; 2) the listing is warranted; or 3) the listing is warranted, but precluded by "higher priority listing decisions and expeditious progress is being made toward those priority activities" (16 U.S.C. §1533(b)(3)(B)(i)-(iii). The five listing criteria of the ESA are: 1) the present or threatened destruction, modification, or curtailment of its habitat or range; 2) overutilization for commercial, recreational,

scientific, or educational purposes; 3) disease or predation; 4) the inadequacy of existing regulatory mechanisms; or 5) other natural or anthropogenic factors affecting its continued existence. If the population is found to be threatened with or in danger of extinction over all or a significant portion of its range by any one of the listing factors, the status determination will be to list the species. If the assessment by FWS determines that the listing is warranted, the FWS publishes a proposed rule to list the species in the *Federal Register*. If the listing is not warranted, the FWS does not propose the species for listing, ending the listing process. If the listing is deemed "warranted, but precluded", the FWS gives the species a priority number and places the species on the candidate species list for yearly status review (16 U.S.C. §1533(b)(3)(C)(i).

Under ESA statute, once U.S. Fish and Wildlife Service (FWS) publishes a proposed rule to list a species, triggering the notice and comment stage, the agency is required within one year to: 1) conclude the species meets the ESA criteria to be listed as endangered or threatened and publish a final rule; 2) conclude the species does not meet the ESA criteria for listing and publish a final action withdrawing the proposed listing; or, in rare occasions, 3) grant a six-month extension if there is scientific disagreement as to whether or not the species should be listed (U.S. Fish & Wildlife Service, 2017b). When the FWS publishes a proposed rule to list in the *Federal Register*, any interested person or group/organization is invited to comment on and provide additional information for the proposed listing during the published comment period. On occasion, there may be more than one public comment period or an extended public comment period. In cases of high public interest, the FWS may hold a public hearing, or a series of

public hearings or public information meetings (U.S. Fish & Wildlife Service, 2017b). An interested party can request the FWS hold a public hearing.

As with other published final federal rules, the published final rule to list a species (or species) includes a concise general statement of the basis and purpose of the rule and the rule's effective date. A published final action withdrawing a proposed rule for listing states why the biological information/data no longer supports the listing. Once published, the final rule or final action can face legal challenges in the courts to determine the legality of the listing determination through judicial review, a strategy often used for unpopular or contentious and controversial environmental rulemakings (Salzman & Thompson, 2014). Judicial review and other oversight mechanism are discussed in the next chapter.

The goal of the ESA is to conserve endangered and threatened species and ultimately restore species to the level at which they are no longer threatened with extinction. (Carroll et al., 1996; Congressional Review Service, 2018, July 20). As of March 15, 2022, 96 species (i.e., species, subspecies or DPS) have been delisted. Of the species, 65 (54 by FWS and 11 by NMFS) have been delisted due to recovery; eleven (10 by FWS and 1 by NMFS) have been delisted due to being declared extinct; eight (FWS) have been delisted for no longer meeting the statutory definition due to new information; and twelve have been delisted due the listing entity no longer meeting the statutory definition (U.S. Fish & Wildlife Service, ECOS Environmental Conservation Online System, 2022).

V. Conclusion

The Endangered Species Act (ESA) was enacted to strictly protect species that are threatened with extinction and the habitats upon which the species depend. The signing into law of the ESA culminated many years of legislative efforts to address concerns with respect to species imperilment in the U.S. When delegating rulemaking authority to the FWS (and NMFS) to list species as endangered or threatened under the ESA, Congress granted the two agencies broad discretionary powers. The exercising of agency discretion is central to the FWS rulemaking decision-making to list species under the ESA and as such, is worthy of scholarly scrutiny. How *should* FWS exercise its agency discretion when undertaking the federal rulemaking process to list a species under the ESA? And how is that discretionary authority kept in check? The next chapter looks to the Public Administration (PA) scholarship and Administrative Law to address these questions.

CHAPTER 3: AGENCY DISCRETION: ITS ORIGINS AND ITS ROLE IN THE FEDERAL LISTING RULEMAKING PROCESS

> "Where law ends, discretion begins, and the exercise of discretion may mean either beneficence or tyranny, either justice or injustice, either reasonableness or arbitrariness"
>
> Kenneth Culp Davis (Davis, 1971, p.3)[9]

I. Introduction

U.S. Federal rulemaking has wide-reaching effects. Every institution and process of government, every policy deliberation participant, and every person affected by a rule, has been impacted by the federal rulemaking process (Kerwin & Furlong, 2011). Federal agencies, such as the U.S. Fish and Wildlife Service (FWS), promulgate agency rules to fill in the gaps of broad Congressional legislation (Lemos, 2008). Congress, through its agency-authorizing statutes, grants federal agencies discretionary authority for their rulemaking. The exercise of agency discretion by public administrators is an important consideration in the rulemaking process (Kerwin & Furlong, 2011; Peters, 2013; Warren, 2011). Kenneth Culp Davis (1971), stated, "A public officer has discretion whenever the

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[9] Kenneth Culp Davis is a legal scholar, considered to be the pioneer of administrative law (Levin, 2005) and regarded as the "the most authoritative source on the concept of administrative discretion" (Warren, 2011, p. 315).

effective limits on his power leave him free to make a choice among possible courses of action and inaction" and stressed that "discretion is not limited to what is authorized or what is legal but includes all that is within 'the *effective* limits' on the officer's power" (p.4). Congress granted both implementing agencies, the FWS and the National Marine Fisheries Services (NMFS), broad discretionary powers for listing species and designating their critical habitat. This study analyzes the issues raised by commenters, and each corresponding FWS response, for 11 selected listing rulemakings. The results and findings are then considered through an administrative lens to explore how commenting does influence the FWS use of agency discretion during the notice and comment stage of listing rulemakings. A general understanding of the legal origins of agency discretion is necessary before exploring how commenting can influence FWS's use of discretion during the notice and comment stage of listing rulemakings. How a federal agency can and *should* use its delegated discretionary authority when rulemaking is rooted in administrative law (Kerwin & Furlong, 2011; Lubbers, 2012; Warren. 2011).

This chapter first delves into administrative law, the lens through which the listing commenting analysis is viewed for this study. Key rulemaking legislation which establishes federal rulemaking procedure and delegates discretionary authority to federal agencies are reviewed to provide insight into how the FWS *should* use agency discretion in its listing decision-making process. The discussion then turns to the Public Administration (PA) scholarship to explore how prominent PA scholars view the use of administrative discretion and how that perception has evolved over time. A look at the role agency discretion plays in the implementation of the Endangered Species Act (ESA) is then offered. The chapter concludes with an overview of the federal oversight

mechanisms in place to limit and constrain the federal rulemaking process and federal agencies' use of their discretionary powers, with an emphasis on judicial oversight. The use, misuse and abuse, or lack of use, of agency discretion is often at the core of ESA listing litigation so a more in-depth look at judicial oversight is warranted (Congressional Research Service, 2013, January 23; Doremus, 2006; Holland, 2008; Puckett et al., 2016; Ruhl, 2010; Salzman & Thompson, 2014; Wymyslo, 2009).

II. Administrative Law: The Legal Basis for Federal Rulemaking

Congress, through agency-authorizing statutes, allocates extensive rulemaking powers and broad agency discretion to some federal agencies while severely limiting the rulemaking authority and discretion of other federal agencies (Warren, 2011). As stated above, the ESA grants the FWS wide-ranging discretionary authority during implementation. Agencies working within the same regulatory space, i.e., implementing the same regulatory statute, may, however, utilize different approaches to achieve the same goal based on agency discretion. The next section provides an overview of key federal rulemaking legislation.

a. The Administrative Procedure Act (APA) of 1946

The Administrative Procedure Act (APA) (5 U.S.C. §551 et seq.) was enacted in 1946 in response to the growing Congressional concerns regarding the number of federal agencies created under the New Deal and the expanding powers these agencies possessed (Lubbers, 2012). The APA is widely considered one of the most important pieces of administrative law in the United States as it establishes the standard procedures all federal and independent agencies are required to follow when promulgating rules or

adjudicating conflicts and challenges to a rule[10] (American Bar, 2014; LexisNexis, 2018; Warren, 2011). A federal agency is required to inform the public of its: 1) organization; 2) procedures; and 3) rules, and provide the public an opportunity to participate in its rulemaking process through the "notice and comment" period of the informal rulemaking process. Section 533 of the APA affords citizens the right for broader public participation in the federal rulemaking process (Andrews, 2006). It is important to note, the APA only requires the agency *consider* the submitted public comments; it does not require the agency to *act* on anything learned from the public (Kerwin & Furlong, 2011).

The APA also establishes the formal process for federal judicial review of agency decisions to ensure the agency action is not an abuse of discretion, or arbitrary and capricious (Salzman & Thompson, 2014). Section 706 of the APA grants citizens the right to legally challenge a federal rulemaking. It also establishes the judicial standard of review traditionally used when courts review federal agency informal rulemakings to look for abuse of agency discretionary power (Lubbers, 2012).[11] Litigation and settlement agreements have played a key role in getting species listed (Greenwald et al., 2006; Puckett et al., 2016). Judicial review of agency rulemaking is an important oversight mechanism to reign in or constrain agency discretion and is discussed in more detail later in this chapter. The "arbitrary and capricious" test, also known as the "hard

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[10] The APA makes the distinction between rulemaking and adjudicating for agency actions, requiring significantly different procedures for the two processes (Salzman & Thompson, Jr, 2014). Rulemaking involves the implementation or prescription of policy or law for the future. Adjudication concerns agency decisions, the determination of past and present rights and liabilities (Lubbers, 2012).

[11] APA Section 706(1): "agency action unlawfully withheld or unreasonably delayed"; APA Section 706(2)(A): 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"; APA Section 706(2)(C): "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right"; APA Section 706(2)(D): "without observance of procedure required by law" ((APA, 5 U.S.C. §706, 1946).

look" review, is often used to constrain and check the use of agency discretion by federal agencies, including the FWS.[12]

b. Other Key Federal Rulemaking Legislation

In addition to the APA, other legislation has been passed which is impactful to the federal rulemaking process. During a period of extraordinary rulemaking growth in the 1930s, Congress enacted the Federal Register Act (FRA) of 1935 (44 U.S.C. Chap. 15) to establish a uniform system for handling regulations promulgated by federal agencies. The FRA establishes the Administrative Committee of the Federal Register (ACFR), a permanent executive and/or legislative branch authority, to oversee the *Federal Register* publications system (National Archives, 2016). The *Federal Register* contains federal agency final rules and regulations, proposed rules and public notices, presidential executive or other proclamations, and other documents the President or Congress require to be published. The *Federal Register* provides official notice of a rule's existence and content, and is published each business day by the National Archives and Records Administration (NARA) in partnership with the Government Printing Office (GPO) (National Archives, 2017). The online version of the *Federal Register, federalregister.gov,* was used extensively as a data source for this study.

Beginning around 1969, Congress began enacting various specific regulatory statutes mandating distinct rulemaking procedures that supplement or supersede some of the requirements of the APA. Section 11(g) of the Endangered Species Act (ESA), a citizen's suit provision, provides a means by which the public can challenge the FWS's

[12] APA Section 706(20(A): "arbitrary, capricious, an abuse of power, or otherwise not in accordance with law" (APA; 5 U.S.C. §706(20(A)).

rulemakings and use of agency discretion (Andrews, 2006; Layzer, 2012a; Lubbers, 2012; Rosenbaum, 2014). Statutes of the subsequent legislation also mandate specific areas of rule development and imposed mandatory deadlines for rule completions (Kerwin & Furlong, 2011; Lubbers, 2012). Table 3.1 provides a brief summary of some of the more recent legislation which has had an impact on the federal rulemaking process.

Table 3.1 Additional Federal Rulemaking Legislation

Federal Legislation	Legal Action
The Freedom of Information Act of 1967 (5 U.S.C. §552)	Requires federal agencies to disclose any information requested by the public under a FOIA request unless the information falls under one of nine exemptions (FOIA.gov)
The Congressional Review Act 1995 (5 U.S.C. §§801-808)	Empowers Congress to review new federal regulations issued by federal agencies through an expediated legislative process, allowing Congress to overrule a regulation by the passage of a joint resolution
The E-Government Act 2002 (44 U.S.C. A §3601 note)	Provides electronic accessibility to the federal rulemaking process by requiring the acceptance of electronic public comment submission during the "notice and comment" stage of the informal federal rulemaking process

Concerns over the level of federal agencies' rulemaking authority and discretionary powers led to the passage of the Freedom of Information Act (FOIA) and the Congressional Review Act (CRA). An important aspect of the legitimacy of the federal rulemaking process is the public's right to inspect almost all government records. The Freedom of Information Act (FOIA) gives the public the right to request information about government records related to agency decision-making, adding to the transparency

and accountability of the federal rulemaking process. Federal agencies are required to disclose any information requested by the public under a FOIA request unless the information falls under one of nine exemptions, which can be found at *FOIA.gov*. Documents and submitted comments for FWS listing determinations not found in the online rulemaking docket cane be requested from the region office listed on the final rule or action, or if necessary, through a FOIA request, as a means for agency transparency with respect to listing determinations.

The Congressional Review Act (CRA) grants Congress the power to review and overturn a federal regulation within 60 days of finalization through an expediated legislative process. Additionally, if a rule is overturned through the passage of a joint resolution, the CRA prohibits the reissuing of the same rule or a new rule that is deemed substantially the same as the overturned rule (Congressional Review Service, 2016, November 17). The FWS final rule removing the gray wolf, *Canis lupus*, from the federal list of Endangered and Threatened Species in the contiguous 48 States and Mexico which took effect on January 4, 2021 could have been repealed under the CRA, but the newly seated Congress did not take up the rule (Roggenkamp, 2020, November 20). Instead, on February 10, 2022, a U.S. District judge struck down the Trump Administration's FWS delisting decision, restoring ESA protections (Doyle, 2022, February 10).

The E-Government Act of 2002 was enacted by Congress to provide electronic accessibility to the federal rulemaking process in response to advancing technology and the age of the internet. "e-rulemaking" was established, in part, to increase the level of public participation in the federal rulemaking process (De Figueiredo, 2006, pp. 974-975). A significant rise in "e-rulemaking" has occurred since 2006, with the majority of

public comments now being submitted electronically. Mass commenting campaigns organized by environmental and advocacy groups have been used to electronically submit form letters in support or opposition to contentious species rulemakings. The proposed delisting of the gray wolf by the Trump Administration resulted in 1.8 million comments being submitted by the public (Caldwell, 2019, July 15). But despite efforts to make the federal rulemaking process more accessible to the citizenry through the advent of "e-rulemaking", concerns still exist over the process and the federal agencies delegated rulemaking authority (Coglianese et al., 2008; Lubbers, 2012). More recently, the issue of fake commenting has taken center stage after nearly 18 million of the more than 22 million comments received for the FCC net neutrality rulemaking were confirmed as fake (Ag.ny.gov, 2021, May 6).

c. Federalism and American Indian Tribal Rights

A discussion of the federal rulemaking process would be incomplete without addressing federalism and tribal rights, especially as both can result in conflicts over ESA listings and critical habitat designations (Nagle, 2017; Schmidt & Peterson, 2009). The Tenth Amendment of the Bill of Rights protects states' rights by expressing the principle of federalism, stating, "powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people" (U.S. Const. amend. X). Delineating exactly where the powers of the federal government end and the powers of the States start with regards to how rules are enacted and enforced is often contentious, particularly with environmental laws like the Endangered Species Act (Hirokawa & Gryskewicz, Jr., 2014). States prefer not to have species listed, wanting to avoid the federal land use regulations enacted to protect a species when listed (Nagle,

2017). Federal agencies are required to consult with State and local officials early in the rulemaking process and prepare a federalism summary impact statement prior to promulgating any rule with unfunded federal implications (Congressional Research Service, 2013, June 17).[13]

The U.S.' duty to protect tribal rights, often referred to as the Federal Indian Trust Responsibility Doctrine, has long been recognized by the Courts, Congress and the Executive Branch (Tsosie, 2003). In return for the tribes turning over the majority of their lands to the federal government, the government promised to protect the remaining Indian lands and their natural resources, such as fish and wildlife (Wood, 2003). Tribal sovereignty is at the core of the trust responsibility between the United States and the tribes, with the tribal lands retained through the various treaties a crucial part of that tribal sovereignty (Zellmer, 1998). Federal agencies are required to fulfill that trust responsibility when conducting federal actions involving tribal resources, such as wildlife and its habitat on reservation lands. Agencies are obligated to work directly with tribes while developing rules and agency determinations must acknowledge tribal sovereignty. Conflicts can arise when species listings and critical habitat designations limit tribes' use of tribal lands and resources for cultural, and economic purposes, such as energy extraction (Holt, 2021; Schmidt & Peterson, 2009).

While the use of agency discretion is based in administrative law, the wisdom of delegating bureaucrats' discretionary authority when rulemaking has long been debated by Public Administration (PA) scholars (Finer, 1941; Friedrich, 1940; Lowi, 1969;

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[13] In 1999, to reinforce the Constitution's governmental division between States and the federal government for the formulation and implementation of federal agency policies, President William J. Clinton signed Executive Order 13132. The order furthers the policies of the Unfunded Mandates Reform Act (UMRA)

Pressman & Wildavsky, 1984; Wilson, 1887). A look at the PA scholarship offers a different perspective into the FWS's use, and potential misuse, of discretion, further informing this study's analysis.

III. Public Administration Scholarship: The Use of Discretionary Authority

The existence of federal agencies can be traced back to 1789 (Warren, 2011). How to hold the non-elected public policy administrators, the "bureaucrats", accountable to the elected policymakers and the electorate has continued to be debated since Woodrow Wilson's foundational essay on the politics-administration dichotomy (Wilson, 1887). Administrative discretion is considered an extension of democratic accountability, a fundamental concept found throughout the Public Administration (PA) literature (Mulgan, 2000). Broadly stated, "accountability" refers to "answerability for one's actions or behaviors" (Romzek & Dubnick, 1987, p.228). Wilson stressed the importance of keeping politics out of administration, advocating for apolitical bureaucrats to carry out the tasks set forth by the elected officials, but did concede, however, that "large powers and unhampered discretion" for administrators appeared to be "the indispensable conditions of responsibility" (Link et al., 1966, p. 373).

The 1940-1941 Friedrich-Finer debates brought the use of administrative discretion to the forefront of Public Administrative scholarship (Mulgan, 2000). Carl Friedrich and Herman Finer, both distinguished political scientists, engaged in a running intellectual debate over administrative responsibility and the role of professionalism versus democratic responsibility (Mosher, 1981; Stewart, 1985). Friedrich (1940), a champion of administrative discretion, argued that administrative responsibility not only entailed the execution of formulated policy, but also came with the added responsibility

of being responsive to the existing public preferences and to technical knowledge. The scholar asserted that public policy is a continuous process, with administrators playing a significant role in the evolving policy (Friedrich, 1940; Mosher, 1981; Stewart, 1985). Good policy requires the use of administrative discretion to ensure that the policy is accountable to the professional controls of objective scientific standards and responds to popular sentiment. As previously discussed, the FWS officials rely on their broad discretionary authority when deciding which scientific data and information constitutes the "best available science" for listing determinations.

Hermann Finer (1941), however, argued against Friedrich's professional autonomy, the use of administrative discretion, asserting that the elected representatives should determine the course of action to be taken by public servants "to the most minute degree that is technically feasible" (p. 336). Finer (1941) believed in institutional controls. He thought that administrators should be responsible to the elected representatives, and through them, to the electorate, and that proper bureaucratic control was needed to ensure bureaucratic accountability (Mosher, 1981; Stewart, 1985). The scholar believed that public servants, such as administrators, would abuse their power if external controls were lacking, in other words, if they had administrative discretion (Mosher, 1981; Stewart, 1985).

Since the Friedrich-Finer debates, PA scholars have continued to disagree over how much discretionary authority should be afforded federal agencies, bureaucrats (Andrews, 2006; Epstein & O'Halloran, 1994; Layzer, 2012a; Lowi, 1969; Meier & O'Toole, Jr., 2006; Pressman & Wildavsky, 1984). The creation of federal agencies with delegated discretionary authority in the 1940s resulted in a shift from the previously

congressionally-centered lawmaking to a heavy reliance on federal agency rulemaking. Theodore Lowi (1969) argued that the U.S. federal rulemaking process gave federal agencies too much discretion when rulemaking, allowing interest groups' bargaining power to achieve laws in their best interest rather than in the public or nation's best interest and making the process undemocratic. The scholar stressed the need for more formal administrative rulemaking which required the adherence to additional prescribed written rules to curtail agency discretion, and criticized Congress for writing laws which were too vague and inconsistent in an attempt to avoid having to make difficult political tradeoffs.

In contrast, Pressman and Wildavsky (1984) argued that administrative discretion is "both inevitable and necessary," submitting that "learning and invention" are necessary when implementing policy in an uncertain world, but did caution that administrative discretion could be used as a means for arbitrary or capricious agency behavior, or actions outside of policy intentions (p. 175). Epstein and O'Halloran (1994) additionally warned that limiting agency discretion is not without cost, that by limiting agency discretion, agency flexibility is also limited, restricting an agency's ability to be responsive. Meier and O'Toole, Jr. (2006) reported that decades of research had indicated the impossibility of eliminating discretion from bureaucratic decision making and argued that its omnipresence posed a threat to democracy. However, as stressed by Epstein and O'Halloran (1994), limiting agency discretion is not without cost. By limiting agency discretion, agency flexibility is also limited, restricting an agency's ability to be responsive. As discussed later in the chapter, courts tend to defer to an agency's "expertise" when reviewing its use of discretion during a rulemaking.

Public administration scholarship lends perspective to the importance of agency resources and characteristics with respect to the amount of discretion a federal agency has when rulemaking. An agency's resources include its legislative authority, expertise, leadership, cohesion, and the salience of the regulatory issue at hand (Meier, 1985). Meier (1985) contended that a federal agency's level of discretion is a function of its resources and the level of tolerance of those in the political system. Other scholars stated similarly that agency characteristics all play a role in the decision-making of an agency while engaging in rulemaking (Hawkins & Thomas, 1989; Layzer, 2012a; Meier & O'Toole, 2006; Reenock & Gerber, 2007; Wilson, 1989). Agency characteristics include policy expertise, professional values, and agency structure, culture and mission. Wilson (1989) stated that agencies not only differ in statutory origins and political environments, but also differ as a result of different agency experiences and the extent to which their agency tasks have been shaped by external interests. According to Anderson (2011), "An agency dwells and acts on a political milieu that affects how it exercises power and carries out its programs" (p. 225). In a study looking at individual use of discretion by the street-level bureaucrats, Kelly (1994) found that the degree and the impact of the discretion used by the individuals depended, in part, on the organizational culture regarding the use of discretionary authority. As a reminder, while the FWS does adhere to an established listing procedure, with the ultimate listing authority residing with the Secretary of the Interior. Domestic listing determinations are generally made at the regional level, with the regional FWS officials exercising their discretionary authority. The next section explores how the FWS uses agency discretion when making listing determinations to inform the analysis for this dissertation.

IV. Agency Discretion and the Implementation of the Endangered Species Act

Calvert et al. (1989) defined agency discretion as "consisting of the departure of agency decisions from the positions agreed upon by the executive and legislature at the time of delegation [of authority] and appointment [of the agency director]" (p.589). In scientific rulemaking, scientific principles and scientific data are not always adequate enough to lead to consensus among the involved trained experts (MacGarity, 1984). Often ESA implementing agencies are inadequately staffed and/or face considerable technical uncertainty (Yaffee, 1982). As a result, the agency undertaking the scientific rulemaking has to rely on agency discretion. When implementing the ESA, the tasked agencies make discretionary judgments as to which species status to review, which experts to ask, and which scientific data to believe. Yaffee (1982) argued that the ESA is actually implemented through a "mix of science, art, and politics" with the administrative experts' "individual attitudes, values, and professional norms" playing a significant role in the process (p. 70).

Out of a concern for the level of agency discretion granted by the ESA, in 1982 Congress amended Section 4 of the ESA to restrict the Secretary's listing discretionary power by making clear that determinations are to be made solely on the best scientific and commercial data available, BAS, with no consideration of the economic impacts of the listing (Goble, 2006; Scott et al., 2006). Despite this BAS mandate, economic issues are still raised by commenters during the notice and comment stage of listing rulemakings, as evidenced during this analysis.

The ESA, in its current amended version (last amended in 2004); however, does not specifically define the term "best available science" (BAS), nor does it expressly

restrict the implementing agency's discretion in determining what constitutes the BAS or how it is used (Carroll, 1996; Doremus, 2006).[14] As a result, based on administrative law, the agencies charged with implementing the ESA have broad discretion in determining what constitutes the BAS, including which technical expertise to use, which can influence the listing process, subject to judicial review (Doremus, 2004; Murphy & Weiland, 2016; Steen, 2013; Weijerman et al., 2014)). The quality of the BAS is evaluated subjectively by the implementing agency, on a case-by-case basis (Weijerman et al., 2014). The United States Fish and Wildlife Service (FWS) and the National Marine Fisheries Services (NMFS), cannot ignore scientific data that is available at the time of the decision-making for a listing, but the ESA does not require agencies to do their own research to address information gaps or obtain missing scientific data (Wymyslo, 2009). Additionally, the two federal agencies also have considerable discretion when choosing the external peer reviewers to review the scientific data and assumptions supporting listing decisions (GAO, 2003).

In a 2008 *Indiana Law Journal* article (Woods & Morey, 2008), FWS Pacific Northwest Region biologist Steve Morey and FWS Midwestern Region Special Assistant to the Regional Director Teresa Woods were able to offer a unique perspective on how the FWS uses its agency discretionary authority to deal with species biological uncertainties and information gaps from the perspective of two different regional FWS offices. Woods and Morey (2008) stated that while the FWS has the agency discretion to

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[14] Congress enacted "significant amendments in 1978, 1982, and 1988", and an associated amendment in 2004: "Section 4(a)(3) exempted the Department of Defense from critical habitat designations so long as an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a) and acceptable to the Secretary of the Interior is in place." (U.S. Fish & Wildlife Service, 2017a).

determine which types, quantity, and quality of scientific information constitutes BAS for a particular listing determination, the FWS has little discretion to defer decision-making for rulemakings when important scientific information is lacking or missing. Instead, analytic approaches "institutionalized by official guidance documents" or "developed by using best professional judgements on a case-by-case basis" are used to deal with the information gaps and decision analysis and modeling are used to address biological uncertainties (Woods & Morey, 2008, p.533). The analytical approach(es) chosen by the FWS "must survive judicial, as well as scientific, scrutiny" (Woods & Morey, 2008, p.533).

V. Federal Oversight Mechanisms: A Check on Federal Agency Discretionary Powers

As previously stated, administrative discretion is considered an extension of democratic accountability. As such, a logical question would then be, how are federal agencies held accountable for their use of agency discretion during their rulemaking decision-making? Alternatively asked, who or what makes sure the agency is compliant with administrative law, rulemaking statute? For example, each of the 11 listing rulemakings analyzed for this study had economic-based issues raised in submitted commenting. As explained previously, the FWS is precluded by ESA statute to consider economics when listing a species, so considering economic impacts for a listing is outside the FWS's discretionary authority. But, who or what makes sure that FWS *is* making its listing determinations based on the best available science and commercial data, per ESA mandate, and not on other factors? The answer is, through federal oversight.

Three definitions found in the literature best encompass what is meant by "oversight". The Congressional Research Service (2014, December 19) broadly defines oversight as the "review, monitoring, and supervision of the implementation of public policy" (pg.1). Kerwin and Furlong (2011) define oversight as "holding those who write rules accountable for decisions they make and the manner in which they make them", arguing that oversight is critical to the maintaining of the U.S. democracy (p.221). McCubbins et al. (1987) described oversight as a political control for "monitoring, rewarding, and punishing bureaucratic behavior" (p.243).

Rulemaking oversight works to ensure that rules achieve their intended regulatory action in an effective, efficient, and economical manner (Kerwin & Furlong, 2011). The federal rulemaking has long been considered to pose issues of legitimacy and political control (Coglianese, 2007; McCubbins et al., 1987; West & Raso, 2012). Oversight of federal agency discretionary authority is important to the legitimization and accountability of the federal rulemaking process (Kerwin & Furlong, 2011; Warren, 2011). Federal agency discretionary power is kept in check by rulemaking procedural constraints set forth by administrative law and oversight powers granted to each of the three co-equal federal branches by Articles I – III of the Constitution (Hawkins & Thomas, 1989; Kerwin & Furlong, 2011; Rinfret & Furlong, 2013; Warren, 2011). Table 3.2 offers a summary of the oversight mechanisms of each of the federal branches. For the purposes of this dissertation, a brief discussion of the oversight and influence of the Executive and Legislative branches is offered before a more detailed look at the oversight and influence of the Judicial Branch is provided. As discussed previously, litigation can play a key role in the listing of species. ESA litigation brought to challenge a species

listing, or lack of listing, often calls into question the agency's discretionary choices, challenging the underlying BAS and analyses used for the agency's determination (Holland, 2008; Lowell & Kelly, 2016; Salzman & Thompson, 2014; Wymyslo, 2009). Correspondingly, a more in-depth consideration of judicial oversight and influence is provided in this section.

Table 3.2 Summary of the Oversight Mechanisms of the Three Federal Branches

Oversight Mechanisms of the Three Federal Branches		
Executive Branch	**Legislative Branch**	**Judicial Branch**
Political appointments and removal of federal agency heads	Delegates rulemaking authority and discretionary power to federal agencies, using statutory language and oversight to rein in/constrain the discretionary authority vested in the agencies	Reviews rules to determine if they are lawful instruments of governmental authority based on the "supremacy clause" of the Constitution
Choosing of senior career executives and transferring or reducing agency personnel through personnel authority granted by the Civil Reform Act (CSRA)	Major rules promulgated by federal agencies are subject to review through the Congressional Review Act (CRA) which gives Congress the power to overturn the reviewed rule	Compel agencies to adhere to congressional rulemaking statutes and explain and defend their discretionary choices
Issuance of Executive Orders	Utilizes a variety of tools to control how agencies make decisions, including having direct oversight by congressional committees and structuring an agency to favor certain preferred outcomes	Through judicial oversight, ensure that the rulemaking process is conducted in accordance with basic constitutional principles and that the process obeys procedural law and substantive law
Use of informal communications and presidential policy directives expressing executive priorities and perceived electoral mandates	Controls and influences the discretionary power of federal agencies through the confirmation of political appointees, the budget and appropriations process, the reauthorization process, the investigatory process, and an impeachment process	When an agency's rulemaking is challenged before the courts, the court can expand or contract an agency's statutory authority and discretionary powers when promulgating rules as a result of the court's judicial interpretation of statue
Informal communications with federal agencies during the drafting process	Individual members of Congress can submit comments during the	Can overrule an agency rule by holding that improper procedures were

of proposed and final rules and regulatory review of regulations prior to publication in the Federal Register by the Office of Information and Regulatory Affairs (OIRA)	notice and comment stage to try to influence an agency's rulemaking	used by the agency when promulgating the rule
Imposed budgetary constraints or cuts	Through phone calls of arranged meetings, members of Congress or their staff can attempt informally to change the priority of a rulemaking project and/or influence federal agency decision-making process	During litigation, rules if the federal agency misused or abused its discretionary power, engaged in agency overreach, when promulgating a rule

(Anderson, 2011; Congressional Research Service, 2014, December 19; DeShazio & Freeman, 2003, 2005; Hawkins & Thomas,1989; Kerwin & Furlong, 2011; LAW, 2018; Lubbers, 2012; Macey, 1992; McCubbins & Schwartz, 1984; Mendelson, 2011; Moe, 1982; Naughton et al., 2009; Office of Information and Regulatory Affairs, Office of Management and Budget, 2018; Peters, 2013; Rinfret & Furlong, 2013; Sunstein & Strauss, 1986; Thrower, 2017; Warren, 2011; Watts, 2009; Weingast & Moran, 1983; Wood & Waterman, 1991)

a. Executive Oversight and Influence

Executive oversight ensures that rules promulgated by federal agencies within the executive branch reflect the substantive policies and political agenda of the current administration (Kerwin & Furlong, 2011). The U.S. Constitution entrusts executive power to the president, requiring the president to "take Care that the Laws be faithfully executed" (U.S. Const. art. II, §§ 1,3). Executive officials working with presidential authority predominantly control and direct the federal agencies within the Executive branch.

The president can exert direct influence over the agencies through top-level political appointments, removal of agency heads, the issuance of executive orders

(Anderson, 2011; Mendelson, 2011; Moe, 1982; Naughton et al., 2009; Sunstein & Strauss, 1986; Thrower, 2017; Watts, 2009; Wood & Waterman, 1991), and through more opaque ways, such as through the use of informal communications and presidential policy directives expressing executive priorities and perceived electoral mandates (Mendelson, 2011; Watts, 2009). Executive Branch oversight of federal agency discretion is also accomplished through the Office of Information and Regulatory Affairs' (OIRA) regulatory review process (Anderson, 2011; Thrower, 2017; Wood & Waterman, 1991) and through the Office of Management and Budget's (OMB) budgetary controls on federal agency resources (Anderson, 2011; Thrower, 2017; Wood & Waterman, 1991).

b. Congressional Oversight and Influence

As provided previously, Congress delegates rulemaking authority and discretionary power to federal agencies within the Executive Branch. Accordingly, Congress is granted extensive authority to oversee and investigate executive activities as part of the check and balances of powers written into the Constitution (Congressional Research Service, 2014, December 19; Lubbers, 2012). Congress relies primarily on statutory language and *ex post* oversight to rein in the discretionary authority vested in agencies in its watchdog role (DeShazio & Freeman, 2003). Congress is viewed as having the most effective external controls over federal agency rulemaking and serves the important role of both overseeing and shaping rulemaking decisions, in part, through its legislative power to enact statutory requirements, which can limit agency rulemaking discretion (Congressional Research Service, 2014, December 19; Warren, 2011; Watts, 2009).

Additionally, Congress controls and influences the discretionary power of federal agencies through the confirmation of political appointees, the budget and appropriations process, the reauthorization process, the investigatory process, and even an impeachment process (Congressional Research Service, 2014, December 19; Lubbers, 2012; Naughton et al., 2009). Members of Congress or their staff will also attempt to informally influence federal agency decision-making through phone calls or arranged meetings (Lubbers, 2012) and individual members of Congress may even try to influence an agency's rulemaking outcome through the submission of comments during the notice and comment stage (Watts, 2009).

c. Judicial Oversight and Influence

The Courts have assumed an increasing role in the legitimizing of federal agency rules through the issuance of authoritative statements based on the "supremacy clause" of the Constitution (Peters, 2013). The supremacy clause of the U. S. Constitution (Article IV, Clause 2) establishes that the Constitution is the supreme law of the land and that as such, all laws and treaties made pursuant to the Constitution are the supreme law of the land (LAW, 2018; Peters, 2013). The federal judiciary has a long history of due diligence in its oversight of the rulemaking process, reviewing rules to determine if they are lawful instruments of governmental authority (Kerwin & Furlong, 2011). By forcing agencies to adhere to congressional rulemaking statutes and to explain and defend their discretionary choices, the Courts operate as a "brake on runaway bureaucracies" (DeShazio & Freeman, 2003, p. 1460). While presidential and congressional oversight objectives are generally considered political, the courts' role in rulemaking oversight is to ensure that the rulemaking process is conducted in accordance with basic constitutional principles

and that the process obeys procedural law and substantive law (Lubbers, 2012). With that said, it is important to remember that federal judges are appointed by the president and confirmed by the Senate, with politics often playing an important role in the process (Kerwin & Furlong, 2011).

The courts' powers of judicial review and judicial statutory interpretation can greatly impact an agency's rulemaking and use of discretion (Anderson, 2011). When an agency's rulemaking is challenged judicially, the court can essentially expand or contract the agency's rulemaking statutory authority and discretionary powers through the court's judicial interpretation of statue. The court can also overrule an agency rule by holding that improper procedures were used by the agency when promulgating the rule (Anderson, 2011). Court cases arguing the use and misuse of agency discretion with respect to rulemaking are numerous, with many courts trying to limit an agency's discretion by noting specific instances of agencies exceeding or abusing their discretionary authority (Warren, 2011). When ESA rulemaking proves contentious or controversial, opposing sides often litigate to seek judicial review of the agency's use of its discretionary powers when making its listing, or delisting, determinations (Salzman & Thompson, 2014; Scott et al., 2006).[15] Recently the U.S. District Court for the Northern District of California vacated the FWS December 2021 rule delisting the gray wolf

[15] Was there agency overreach? Was the rulemaking action "arbitrary and capricious"? Was the agency's interpretation of ESA statute reasonable, or was the rulemaking manifestly contrary to the statute? Under the "Scope of Review" provision (5 U.S. Code §706) of the Administrative Procedure Act (APA) of 1946, a reviewing court can "hold unlawful and set aside agency actions, findings and conclusions, found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" (2(A)). Courts will use the "arbitrary and capricious" test during a judicial review to look for agency abuse of discretion (Lubbers, 2012). During judicial reviews of high-stakes rulemaking proceedings, the courts will rigorously apply the "arbitrary and capricious" criteria (see Appendix G) to look for grounds to overturn an agency action, a practice commonly known as the "hard look" judicial review.

finding that the rule violated the ESA and the APA (Congressional Review Service, 2022, February 18).

Kerwin and Furlong (2011) identified four major considerations of judicial oversight in play when a rule is challenged in the courts: 1) the principle of *standing*, who has the right to challenge a rule in court; 2) the *scope of review*, what types of complaints can challengers of the rule bring before the court; 3) the *standards* or *doctrines* the courts apply when considering challenges to agency rulemaking; and 4) the effects of judicial oversight on the conduct of rulemaking, the practical *implications* of judges' decisions in individual cases. When analyzing ESA listing rulemakings, a familiarity with the case law which establishes the standard and scope of judicial review is prudent.

Two cases which have impacted how agencies conduct rulemakings are the *Overtone Park* decision in 1971 and the *State Farm* decision in 1983, both considered landmark judicial standard of review rulings by the U.S. Supreme Court (Lubbers, 2012). In *Citizens to Preserve Overton Park v. Volpe*, plaintiffs challenged the authorization of federal funds for the construction of a six-lane interstate highway through a public park in Memphis, arguing that the Secretary of Transportation's approval of the highway funding was invalid because he had failed to indicate why he believed there were no other "feasible and prudent" alternative routes, as required by the two relevant federal statutes. The *Overton Park* decision, although not itself involving a federal agency rulemaking, signaled a new level of scrutiny of agency rules by the courts by setting forth a legal framework for judicial review of administrative agency actions (Lubbers, 2012). As a result, agencies are now essentially forced to keep more formalized administrative records of their rulemakings to be able to survive the more intensive judicial standard of

review for agency discretionary authority, commonly referred to as the "hard look" review. FWS, as well as all other federal agencies, keep detailed formal administrative records, including rulemaking dockets available to the public, to hold up to the increased level of scrutiny. As detailed in the methodology chapter, the narrative comments in a final FWS rule or action are considered to be representative of the submitted comments, in part, because of this resulting increased level of scrutiny of a rulemaking's formal administrative records.

In the other landmark case, *Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Insurance Co*, the Supreme Court heard a challenge on the rescission of a Traffic Safety Administration's (NHTSA) rule requiring passive restraints (such as automatic seatbelts and airbags) following the election of a new president of a different political party. (Lubbers, 2012). The U.S. Supreme Court held that the administrative record was not sufficient to substantiate that the rescission was the product of a reasoned decision-making. The *State Farm* case revisited the scope of the court's arbitrary and capricious standard of review, resulting in further heightened scrutinization of federal agency actions by the courts, including agencies use of discretion (Garry, 2006; Lubbers, 2012). As a result of the U.S Supreme Court's ruling, agencies are required to examine all the relevant data and be able to rigorously justify their actions with a "rational connection between the facts found and the choice made" (Lubbers, 2012, p. 9). Consequently, when a FWS rulemaking is litigated, the FWS has to be able to show that it evaluated all the best available science and be prepared to justify its discretionary actions, or risk the rule being vacated and remanded or overturned.

Two other cases, establishing deference doctrines for review of agency discretion, warrant discussion for this dissertation: the *Chevron* decision in 1984 and the *Auer* decision in 1997. As stressed previously, the use of agency discretion is integral to the FWS rulemaking process, and is at the focus of this study. Since the 1940s when federal agencies first took a central role in regulatory rulemaking, the U.S. Supreme Court has applied various deference doctrines to review agency interpretations of ambiguous statutes and rules as dictated by Section 706, "Scope of Review", of the Administrative Procedure Act (APA) (Administrative Procedure Act, 5 U.S.C. §551 et seq., 1946; Pierce, Jr., 2016; Warren, 2011). In the landmark case *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.* (1984), the EPA's decision to allow States to treat all of the pollution-emitting devices within the same industrial grouping as one "stationary source" was challenged. The Supreme Court ruled that the EPA's statutory interpretation of "stationary source" was permissible, consistent with the view that the EPA should have broad discretion in implementing the policies of the 1977 Amendments of the Clean Air Act (*Chevron*, 1984). In *Chevron*, the Supreme Court adopted a review doctrine, for the judicial review of a federal agency's use of discretionary authority to interpret ambiguous language within its enabling statute, by setting forth a "2-step" legal test, now often referred to as the "*Chevron* two-step" approach or the *Chevron* test (Garry, 2006; Lubbers, 2012). Prior to the *Chevron* decision, the level of deference afforded federal agencies when interpreting ambiguous statutes varied widely across federal courts, resulting in geographical inconsistencies with regard to decisions (Garry, 2006; Pierce, Jr., 2016). *Chevron* test is now considered the deference doctrine for the review for agency "statutory interpretation" (Kerwin & Furlong, 2011; Pierce, Jr., 2016; Salzman &

Thompson, 2014). Scholars argue that the *Chevron* decision has greatly expanded the power of federal agencies and their use of discretion by sanctioning broad deference to agency expertise by the courts and by endorsing "broad, vague, and frequently irresponsible delegations of legislative power by Congress to public agencies" (Kerwin & Furlong, 2011; Lubbers, 2011; Warren, 2011, p. 44).

Another lesser-known deference doctrine, the *Auer* doctrine, is applied by the courts when reviewing agency interpretations of its own agency rules (Pierce, Jr., 2016). In *Auer v. Robbins*, police officers employed by the St. Louis, MS Police Department sued for overtime, under the Fair Labor Standards Act. The U.S. Supreme Court gave deference to the Labor Department's interpretation of its existing rule, resulting in the officers not being eligible for overtime. The *Auer* doctrine, seemingly equal to the *Chevron* deference, gives deference to the agency's interpretation of its own rule unless it is "plainly erroneous and or inconsistent with the regulation" (*Auer v. Robbins*, 519 U.S. 452, 461, 1997; Lubbers, 2012; Pierce, Jr., 2016). One of the concerns over the *Auer* doctrine reported in the literature is that the doctrine encourages agencies to issue rules that are ambiguous and vague to allow them the use of their discretionary authority to later interpret that regulation (Pierce, Jr, 2016). To highlight the significance of judicial oversight and to illustrate the influence the courts can have on listings and delistings, the last section provides a brief look at 3 ESA litigations:

1.The Atlantic Salmon Gulf of Maine DPS Endangered Listing

In *Maine v. Norton*, 257 F. Supp. 2d 357 (D. Me. 2003). A coalition of interested parties, including the State and other business interests, challenged FWS and NMFS's characterization of the salmon as a distinct population segment (DPS), asserting the joint

determination to list the salmon as such on November 18, 2000 (65 FR 69459) by FWS and NMFS was “arbitrary and capricious”. The U.S. District Court for the District of Maine upheld the listing, affirming the listing was based upon the best scientific data and was clearly supported by the administrative record giving deference to the FWS’ broad use of agency discretion when decision making for a DPS listing, in this case for the salmon DPS listing (*Maine v. Norton,* 2003; Sanders, 2003).

2. The Greater Yellowstone Ecosystem (GYE) Grizzly Bear Population Delisting

In *Crow Indian Tribe, et al. v. United States of America, et al. and State of Wyoming, et al.* CV 17-89-M-DLC (D. Mont. 2018), the Crow Indian Tribe and other plaintiff groups challenged the delisting of GYE Grizzly population under the ESA. U.S. District Court Judge Dana Christensen restored federal protection for the Greater Yellowstone Ecosystem (GYE) Grizzly bear population, vacating the FWS 2017 final delisting. Similar to the court finding for the WGL wolf DPS, Judge Christensen found that the FWS had failed to consider the impact of delisting the GYE DPS on the other members of the lower-48 grizzly designation still under federal protection during its analysis. The Judge also ruled that the FWS had acted “arbitrarily and capriciously” when conducting its analysis of the five listing/delisting factors as required by the ESA. The U.S. District Court ruling is currently still under appeal.

3. The Removal of the Gray Wolf from the List of Endangered and Threatened Wildlife Species

In *Defenders of Wildlife, et al. v. U.S Fish and Wildlife Service, et al.* (Case No. 21-cv-00344-JSW) (2022); *Wildlife Guardians, et al., v. United States Department of the Interior* (Case No. 21-cv-00349-JSW) (2022); and *Natural Resources Defense Council,*

Inc., v. United States Department of the Interior (Case No. 21-cv-00561-JSW) (2022), groups challenged the delisting of the Gray Wolf in the contiguous 48 States and Mexico. The U.S. District Court ruled that the rule violated the ESA and the APA. U.S. District Judge Jeffrey White found that "the Service's analysis relied on two core wolf populations nationally and failed to provide a reasonable interpretation of the 'significant portion of its range' standard", and in doing so, struck down the delisting and restored ESA protections to the gray wolf in the contiguous U.S. and Mexico, except for the Northern Rockies wolf DPS which were previously delisted through a congressional Ryder.

VI. Conclusion

The FWS's use of agency discretion is central to its ESA listing rulemaking process. When implementing the ESA, the FWS relies on its discretionary authority to make the necessary discretionary decisions regarding which species listings are warranted, which experts to solicit input from, and which science constitutes the best available science (BAS) for its listing determinations, as required by ESA statute. As elucidated in this chapter, the FWS's discretionary powers are rooted in administrative law, more specifically, in the Administrative Procedure Act (APA), and Endangered Species Act (ESA) statute. By law, the FWS is required to be compliant with the federal rulemaking procedures set forth in Section 533 of the APA and all superseding procedures established by the ESA. As such, when rulemaking to list species, the FWS must: 1) publish the proposed listing rule; 2) solicit public commenting on the listing proposal; and 3) state the basis and purpose of the final listing rule. While the FWS has been granted broad discretionary authority when implementing the ESA, its discretionary

powers are not unlimited. As noted, as a result of the 1982 amendments, the FWS must base its listing determinations solely on the best available science and commercial data. The FWS cannot consider economics or political pressure and ramifications during its decision-making process. The FWS's use of its agency discretion must be able to hold up to judicial review or risk the rulemaking being overturned or vacated and remanded back to the FWS for further consideration.

This study investigates the influence of public commenting on the FWS's use of agency discretion during its listing determinations for 11 listing rulemakings. As a reminder, the APA only requires the agency *consider* the submitted public comments; it does not require the agency to *act* on anything learned from the public. It is left to the FWS's discretion whether or not to act on information submitted through public participation. Based on administrative law, one would expect the FWS to be responsive to science-based commenting for its listing determinations, but not to economic or political commenting which would represent a misuse or abuse of its discretionary authority.

The next chapter reviews studies found in the literature which investigate commenting influence during the federal rulemaking process.

CHAPTER 4: LITERATURE REVIEW

I. Introduction

Regulatory policy is made through the federal rulemaking process by individuals within federal agencies who have not been duly elected by the citizenry (Golden, 1998; Kerwin & Furlong, 2011; Lubbers, 2012; Mantel, 2009). Consequently, the bureaucrats involved in federal rulemaking are "accountable to the American people only through indirect means", such as through the public participation in the notice and comment stage of the federal rulemaking process (Kerwin & Furlong, 2011, p. 167).

This study explores the influence of commenting on the FWS's use of discretion during its listing rulemaking through an analysis of the FWS responses to the identified issues raised by commenters provided in the final rules and actions of 11 listing rulemakings. Seeking to fill an identified gap in the rulemaking scholarship, as well as in the ESA scholarship, this research explores the types of issues raised by external participants, or "actors", during the listing rulemaking notice and comment stage and the FWS responses to those raised issues as a measurement of comment influence.[16] This chapter reviews the studies found in the federal rulemaking literature which examine participation in the notice and comment stage of the federal rulemaking process. External

[16] "External" actors are categorized in the literature as those commenters participating outside of the federal government and its federal institutions. For this dissertation, external actors refer to those from state and local government and representatives of the military and tribes, public interest groups, business and industry, the public, and the media. A public interest group is defined as a group which "seeks a collective good which will not materially benefit only the members or activists" (Berry, 2016, p. 7).

participants in the notice and comment stage are identified. The review also explores the various strategies and tactics used by those participants in their attempts to influence rulemakings.

As previously discussed, federal agencies are procedurally required to solicit and address public comment (Administrative Procedure Act, 1946; West, 2004). The broad right of access to the federal rulemaking regulatory process is considered one of the most distinctive features of modern U.S. environmental protection policy (Andrews, 1999). Public participation in the rulemaking process not only contributes to the legitimacy of the process, but also informs the agency as to the acceptance or resistance to a rulemaking by those affected, indicating the chances of a legal challenge to a published rule prior to implementation (Kerwin & Furlong, 2011). Despite criticism that the notice and comment stage commenting process does not provide an adequate forum for public participation (Croley, 1998; Mendelson, 2011; Wagner et al., 2011), agencies do take comments seriously and do modify the final rule as a result of commenting (Cuellar, 2005; Lubbers, 2012). It is important to remember, however, that while federal agencies are required to *consider* the public comments submitted during the notice and comment stage, they are not necessarily required to *act* on the comments.

Scholarship found in the federal rulemaking literature generally falls into two categories:1) studies examining a specific stage in the rulemaking process; and 2) studies examining the entire process of a federal rulemaking. The majority of the existing federal rulemaking literature is focused on the notice and comment stage of the rulemaking process, defined as the part of the process from when the proposed rule is published in the *Federal Register* to when the final rule/action is published in the *Federal Register.*

The scope of this study is the notice and comment stage of the FWS federal listing rulemaking process. As such, the main focus of this chapter is a review of the studies examining the notice and comment stage of the federal rulemaking process.

An exhaustive search of the both the federal rulemaking literature and the Endangered Species Act (ESA) literature found few studies examining the species listing rulemaking process with most of the ESA literature focused on the effectiveness of the ESA and the controversial nature of the Act. The chapter concludes with a review of the limited Endangered Species Act literature found which does focus on the rulemaking aspect of the actual listing process.

II. External Actor Participation and Influence in Federal Rulemaking

While federal agencies are considered the experts of their specific rulemaking areas, agencies still need, and thus seek, information and input from external actors when developing a rule as part of their due diligence (Croley, 1995; Kerwin & Furlong, 2011). As discussed in the previous chapter, federal agencies are required by law to give notice of a proposed rulemaking to the public and "give interested persons an opportunity to participate in the rulemaking through submission of written data, views, or arguments with or without opportunity for oral presentation" in an effort to ensure public participation in the rulemaking process (APA, 5 U.S. Code § 553). Federal agencies are subject to pressure and influence exerted by external actors during the federal rulemaking process (Croley, 1995; Kerwin & Furlong, 2011). The type, extent, and success of participation by external actors participating in the federal rulemaking process vary across agency, rule, and even the stage of the rulemaking. Furlong and Kerwin (2011)

stated that to successfully influence agency decisions, participants in the process need resources, technical expertise, and the ability to organize others.

External actors participating in the rulemaking process have been reported as largely confined to business groups and other organized interest groups, with the extent of participation varying greatly across rules based on the salience and effects of the rules (Kerwin & Furlong, 2011; West, 2005; Yackee & Yackee, 2006). Beierle and Cayford (2002) attributed a reported low participation by the general public to the public's perception that the public has little influence over agency decision-making; the term "general pubic", referring to "ordinary people, especially all the people who are not members of a particular organization or who do not have any special type of knowledge" (Cambridge Dictionary, n.d.).

The notice and comment aspect of rulemaking remains the most basic, yet important, of the many bureaucratic controls in place for the rulemaking process (West, 2005). Golden (1998) argued that the notice and comment provisions of the Administrative Procedure Act (APA) are meant to act as safeguards, forcing the unelected bureaucrats to consider the public interest when formulating federal agency rules as a result of required public participation. As a reminder, the Administrative Procedure Act (APA) grants the public the right to participate in the federal rulemaking process through submitted comments on a proposed rulemaking; however, the agency is not required by law to change the proposed rule to reflect those voiced commenter concerns.

Some scholars argue that the notice and comment stage required by the APA comes too late in the rulemaking process, thus, limiting the desired balanced participation

(Reiss, 2009; West, 2009; Yackee, 2012). The lack of, or only a limited balanced participation, leads to questions of the efficacy and transparency of such a process as a way of legitimizing and ensuring the institutional accountability of the administrative state. West (2004) summarized scholarly assessments of the effects of notice and comment procedure as falling into three distinct schools of thought. The notice and comment requirement: 1) furthers the ostensible goal of allowing affected interests to meaningfully participate and influence the rulemaking process; 2) serves as a "fire alarm", allowing affected interests to monitor and complain about undesirable agency actions; or 3) is more or less just symbolic, helping to legitimize the exercise of delegated legislative authority but not really influencing the process itself. West (2005) argued that for the notice and comment to meet its rulemaking procedural goal, three things must occur: 1) the rulemaking notice must be effective; 2) the submission of comments must occur; and 3) the federal agency involved in the rulemaking must then take those comments seriously during their decision-making process to reach a final action. Most proposed rules are very specific, however, with agencies very reluctant to issue open-ended notices, especially as proposed rules can take years to be developed. Proposed rules can take years to be developed requiring considerable time investment and effort by the agency.

Prior to exploring who participates in the notice and comment stage, and to what level of influence, as reported in the rulemaking literature, the relatively recent phenomenon of mass commenting needs to be addressed. The enactment of the E-Government Act of 2002 and the launch of the Regulations.gov website in 2003 has made the federal rulemaking process more accessible to the public (Coglianese, 2006,

2007, 2008; Farina et al., 2012; Lyons, D., 2018; Mendelson, 2011; Rinfret & Furlong, 2013). As discussed in the previous chapter, "e-rulemaking" allows the pubic to submit comments during the notice and comment stage. Increased media attention, bringing public awareness and generating public attention to a rulemaking, has resulted in increased commenting, and in some instances, extensions to the commenting periods (Cavazos & Rutherford, 2011; Soroko et al., 2015; Wagner et al., 2011; Warren, 2011).[17] The consensus among scholars and agencies, however, is that this mass commenting is essentially useless, with the comments seemingly viewed by the agency rule writers as having little or no value or ability to influence the rulemaking process (Farina et al., 2012; Mendelson, 2011).

While the incidences of mass commenting for new rules is reported as relatively low, highly salient rulemakings or controversial or politically volatile rulemakings can garner hundreds of thousands, or even millions of comments (Farina et al., 2012, Lyons, D., 2018). As discussed previously, the 2019 proposed rule to delist the gray wolf garnered in an estimated 1.8 million comments and the 2017 FCC's net neutrality proposed rule received 21.7 million comments, including nearly "fake" public comments submitted by "bots" (Caldwell, 2019, July 15; Hitlin et al., 2017, November 29; Rinfret et al., 2021).[18] These mass commenting campaigns are not without costs, both monetary and

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[17] Cavazos and Rutherford (2011) examined notice and comment periods for seventy-one Federal Aviation Administration (FAA) rules between 1996 and 2005 to determine if media coverage played a role in the frequency of industry commenting and regulatory outcomes. Cavazos and Rutherford (2011) found the FAA tended to extend its commenting period and was more likely to modify its proposed regulation in the presence of higher levels of media scrutiny. The results also indicated that increased media coverage was associated with an increase in the frequency of commenting by the industries facing the new regulations.

[18] The NY AG (Ag.ny.gov, 2021, May 6) investigated the commenting and found in May 2021 that broadband industry players had paid $4.2 million to generate more 8.5 million fake comments, using real

non-monetary (Lyons, D., 2018). The finalization of the 2007 proposed rule (72 FR 1063) to list the polar bear, *Ursa maritimus*, was delayed due to the FWS having to engage an academic team to go through the approximately 670,000 comments, of which 626,947 were email comments, to separate the substantive comments from those resulting from mass commenting campaigns (73 FR 28211, Lyons, D., 2018).

For clarification, with the exception of the Environmental Impact Statement (EIS) and the FWS reclassifying and delisting rule analyzed for the Kamienicki study (2006a, b), based on the number of comments reported as analyzed, mass commenting was not involved in the rulemakings analyzed for the studies discussed below.[19] The following review of the rulemaking literature provides valuable insight into not only who participates during the notice and comment stage, but also what strategies and tactics those commenters used in attempting to influence the outcome of the rulemaking.

a. Who Participates in the Notice and Comment Stage?

The level of participation by various external actors during the notice and comment stage varies "tremendously" across rulemakings (West, 2009, p. 578). Additionally, just how important public participation, and commenting, actually are during the notice and comment stage is robustly debated among scholars (Golden, 1998; Kamieniecki, 2006a, b; Kerwin & Furlong, 2011; Magat et al., 1986; McKay & Yackee,

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names without consent, to "create appearance of widespread grassroots opposition to existing net neutrality rules" (Shepardson, 2021, May 8). The investigation further found that nearly 18 million of the 22 million public comments both for and against were "fake", with 9.3 million using fictitious identities and 7.7 million submitted by one 19-year-old supporting net neutrality, randomly generating names (Brodkin, 2021, May 8).

[19] The U.S. Forest Roadless Area Conservation EIS had a reported 1,156,308 comments and the FWS rulemaking had a reported 15,554 comments (Kamieniecki, 2006a), "conveyed in various types of form letters" (Kamieniecki, 2006b, p. 15). Due to this volume of commenting, the researcher stated reliance on the services of the U.S. EPA and Content Analysis Enterprise Team (CAET) for part of the study analysis (Kamienieki, 2006a)

2007; Naughton et al., 2009; Nelson & Yackee, 2012; Yackee, 2012, 2019). Despite the federal rulemaking process being structured for public scrutiny and participation; for most rulemakings, business groups and interest groups have been reported as the main "public" participants (Golden, 1998; Epstein et al., 2014; Furlong, 2007; Kamieniecki, 2006a, b; Perez & Prasad, 2020; Yackee & Yackee, 2006; Yackee, 2019). Many scholars have reported that business groups often dominate, or are the most consistent participants, during the commenting process (Golden, 1998; Furlong, 2007; Kamieniecki, 2006a, b; Libgober, 2020; Wagner, 2011; Yackee & Yackee, 2006). Reasons offered for these differing levels of participation include commenting access ease, the level of interest in the specific rulemaking, and the technical and legal complexity of issue(s) being addressed in the rulemaking (West, 2009). Wagner et al. (2011) also posited that part of the imbalance she found when examining the participation and influence of interest groups in the EPA rulemaking process could be due to the technical and complex nature of the EPA rules which generally require more time and resources by the participants.[20]

b. Does Commenting Influence the Rulemaking Process?

Several studies in the literature analyzed the influence of commenting during the notice and comment stage. The reported findings were mixed. One set of researchers found that any changes as a result of commenting were generally narrow in scope, limited (West, 2004), more peripheral, and minor, in nature (Golden, 1998; Kamieniecki, 2006a,

[20] Wagner et al. (2011) examined the rulemaking process for 90 hazardous air pollutant rules (HAPs rules) published by the EPA from 1994 through 2009. The HAPs were promulgated to restrict the release of air toxins from major sources, setting emission limits for different segments of industry. The pre-proposal stage communication was dominated by regulated parties, with industry having, on average, at least 170 times more communications docketed with EPA than public interest groups. Commenting by public interest groups was more prominent during the notice and comment stage, but still was dominated by industry commenting.

b); with major changes to a final rule only achieved on rare occasions (Golden, 1998; Kamieniecki, 2006a, b; Kerwin & Furlong, 2011; West, 2004). Another group of researchers, however, found that commenters can, and frequently do, change the final rule content to align with the interest groups' preferences (Yackee & Yackee, 2006; Yackee, 2006; McKay & Yackee, 2007), with some results indicating a bias towards business (Yackee & Yackee, 2006). The following discussion will first look at the studies which only found minor changes to the rulemakings were likely to occur as a result of commenting influence.

Golden's (1998) seminal study on the notice and comment stage analyzed eleven federal agency rules published from April 1993 to April 1995: three rules issued by the Environmental Protection Agency (EPA), five rules issued by the National Highway Traffic Safety Administration (NHTSA), and three rules issued by the Department of Housing and Urban Development (HUD).[21] The study looked at the changes between the proposed rule and final rule. Written comments submitted to the agencies obtained directly from the public docket rooms of each agency were analyzed to examine who participates in the notice and comment stage and to what extent do the submitted comments alter the context of the rules. Expanding upon Golden's (1998) research, Kamienicki (2006a, b) analyzed six non-randomly selected environmental and nature resources rulemakings and one non-randomly selected environmental impact statement (EIS), published from May 1996 to April 2003: five rules issued by the Environmental Protection Agency EPA addressing, one rule issued by the U.S Fish and Wildlife Service

[21] The EPA rules for emission standards, hazard waste, and acid rain; the NHSTA rules for child restraint, air brakes, theft prevention, warning devices, and electric vehicles; and the HUD rules for elderly and disabled, drug elimination, and income eligibility (Golden, 1998).

(FWS); and one EIS statement prepared by the U.S. Forest Service (USFS) for roadless area conservation.[22] Kamieniecki's (2006a, b) study, using Golden's (1998) degree of change analysis methodology, investigated business commenting influence in the rulemaking process of the EPA and two natural resource agencies, the FWS and the USFS, to examine how certain sectors of industry and business affect environmental policy. This study also uses a degree of change analysis, borrowing from the methodology first used by Golden (1998) and then by Kamieniecki (2006a, b), to select down from 71 to 11 listing rulemakings for commenting analysis (see Chapter 5).

Results from the Golden (1998) study revealed the commenting participation to be heavily skewed towards business and other interest groups, with individual participation lacking. The analysis, however, found that business groups were no more likely to influence rule content than other groups, finding no "undue business influence" (p. 262) in the rules examined for the study. Golden (1998) did posit that the lack of business influence may be due to the business community as a whole not presenting a united front, with her finding frequent divisions within the business commenting. Findings indicated that changes made between the proposed rules and the final rules of eight of the ten rulemakings, in response to commenting, were "minimal" in nature, with only one rule rulemaking showing a large change. One proposed rule was withdrawn. Results revealed that the agencies tended to favor the comments of supporters over those

[22] The EPA rules for arsenic standards, solid waste disposal, hazardous substance list, national LEV program, and emission of air pollutants; the FWS rule for reclassifying and delisting the gray wolf, and the USFS EIS for roadless area conservation (Kamieniecki, 2006a). Of note, the Kamieniecki (2006a, b) analysis of the FWS proposed rule to reclassify and delist the gray wolf, except for four newly classified distinct population segments (DPS), was one of only a few FWS rulemaking analyses found in the literature.

of critics when making those minor rule content changes. The majority of the comments for the five EPA environmental rulemakings analyzed in the Kamieniecki study (2006a, b) were from companies or individuals from utilities, with few comments from citizen groups. In contrast, there were more comments submitted for the two natural resources rulemakings (USFS and FWS) from citizen groups than business groups, or other organizations. For the study, environmental groups were included in the "citizens groups" category. Four out of the five EPA rules saw no change from proposed to final rule, with the one EPA final rule seeing "some" change. The USFS and FWS final rules saw only "minimal" changes, with the final rules becoming slightly less restrictive when compared with the proposed rule.

Golden (1998) concluded agencies often do change the content of rules in response to comments, but that the changes are more peripheral, minor, with only a rare change to the "heart of the proposal" (p. 259). Additionally, the study found that business groups do not have excessive influence in the rulemaking process. Business groups have been reported as using resources to track the *Federal Register* to ensure a familiarity of the methods and modes of participation and to allow business organizations to submit comments consistent with the language used by the agency proposing the rule (Golden, 1998; Kerwin & Furlong, 2011; West, 2005, 2009). Kamienicki (2006a, b) concluded similarly, finding that interest groups, including business, had little or no influence over the environmental and natural resources proposed rules analyzed in his study.

Similar to Golden's (1998) findings, and later Kamieniecki' (2006a, b) findings, West (2004) found that changes occurring during the notice and comment stage of rulemaking were generally narrow in scope. West (2004) examined the rulemaking of

forty-two rules across fourteen agencies through the telephone interviews of agency staffers with knowledge of the examined rulemakings. The study investigated the role procedural accountability plays in the federal rulemaking process. The ultimate goal of procedural accountability in the federal rulemaking process is to "ensure that proposals are based on sound factual and legal premises" (West, 2004, p.68). West (2004) also concluded that agencies are willing to change their proposed rules, to a limited extent, but unlike Golden (1998) or Kamieniecki (2006a, b), stopped short of concluding the changes necessarily resulted from the public comment. Instead, West (2004) advanced that while comments do sometimes have a direct educational effect on the agency staff leading to content changes, often the agency responsiveness is embedded in political processes that eclipse the consideration of public comments.

While Golden (1998), Kamieniecki (2006a, b), and West (2004) found limited commenter influence, as evidenced by only finding minor or peripheral changes made between the proposed and final rules, other scholars report contrasting results which will now be discussed. Yackee (2006) analyzed 40 rules published from 1994 to 2001; eight rules by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA), eight rules by the Employment Standards Administration (ESA), ten rules by the U.S. Department of Transportation's Federal Railroad Administration (FRA), and 14 rules by the Federal Highway Administration (FHWA); to look at direct interest group influence during the notice and comment stage. In contrast to Golden (1998)'s finding of only minimal changes stemming from the commenting during the notice and comment stage, the Yackee (2006) study findings indicated that submitted interest group comments can, and frequently do, change the final rule content to align with the interest groups'

preferences. Yackee (2006) submitted that agencies respond to interest group influence as a result of the groups offering new information and outside expertise, or as a means of heading off future potential court challenges. In a 2019 article reviewing who participates in the rulemaking process and influences the regulatory content, Yackee stated that her research found a "strong correspondence between the regulatory direction signaled in the public comments and the policy change that took place during the notice and comment period" (Yackee, 2019, p. 47).

In another study analyzing the same 40 rulemakings, Yackee and Yackee (2006) looked for business interest group biases during the notice and comment stage to test the proposition that agencies show a "bias towards business" during the notice and comment stage. The researchers proposed that business groups most likely enjoy a disproportionate influence over a rulemaking of interest due to the business groups' ability to provide higher quality comments than other commenters. Three reasons were asserted by Yackee and Yackee (2006) as to why the commenting submitted by the business commenters were of higher quality: 1) business commenters can possess a better understanding of the scientific and technical data and studies cited by the agency in the proposed rule; 2) business commenters are more likely able to respond with sound data of their own; and 3) business commenters are better equipped to submit strong convincing well-drafted arguments due to their expansive resources, such access to lawyers and experts. While findings from the study's content analysis did indicate a bias towards business, with agencies appearing to change final rules in favor of the expressed preferences of business interests while not doing similarly for other interest group preferences, Yackee and Yackee's (2006) contention that business bias was due to business groups offering higher

quality comments was not supported by the study's results. The results did suggest that a higher proportion of business comments may lead to a more favorable rulemaking towards the business interests' preferences. The narrative comments of the 11 rulemakings selected for this study will be analyzed for the types of issues raised during the notice and comment stage to look for patterns of commenting, such a predominance of business commenting as seen in serval of the studies reviewed.

McKay and Yackee (2007) further analyzed the selected 40 rules to look at the level and effects of competitive lobbying during the federal rulemaking process. Results indicated that federal agencies were more responsive to a strong, loud, united front from interest groups in strong support of what the researchers' "squeaky wheel model" (p.344), with the volume of comments found to be a contributing factor to the greater response by the federal agencies. In other words, McKay and Yackee (2007) found that the agency officials were more likely to "grease the squeaky wheel" (p. 341), change a proposed rule, when one side of the commenting was dominant, not unexpectedly. When the commenting was found to be approximately equal between those in support of the proposed rule and those opposed, agency officials did not significantly alter the proposed rule. Findings, however, did not support the researchers' "lobbying begets lobbying model"; i.e., that opposing interest groups compete by actively responding to each other's lobbying activities for a rulemaking (p. 347). In their study, participating interest groups were not found to directly respond to each other during commenting as a means of lobbying for a rulemaking, a tactic referred to as competitive lobbying (McKay & Yackee, 2007).

c. Strategies and Tactics used to Influence Rulemaking

External actors intending on participating in the rulemaking process will track potential rulemakings through various means, including receiving and reading the *Federal Register*, to keep current on pending rulemakings and also to obtain useful information to then use when commenting on a proposed rule (Golden, 1998). Submitted comments have sometimes been found to have a direct educational effect on agency personnel involved in the rulemaking process (West, 2004). Business and industry groups, as well as some other interest groups, with the necessary resources, will use technical expertise to produce and submit their own technical or expert reports as a strategy to influence the rulemaking process. Having legal representation be involved with the submitting of comments is also a tactic used. Corporations will submit comments that offer additional information regarding the rulemaking's underlying science & technology, costs, or that weigh in on the effectiveness of alternatives, as a strategy or tactic to influence an undesired rulemaking (Kamienieki, 2006a, b).

Despite survey findings indicating that rulemaking participants believe agencies are more responsive to concerns raised by business interests than to those of "ordinary citizens" (Yackee, 2015, p. 427; Yackee, 2019), some studies do report higher participation by citizen groups (inclusive of environmental groups) and individual public participants (Kamieniecki, 2006a, b; Michael, 2014). Higher levels of participation by public interest groups or individual are more likely seen with salient rulemakings (Michael, 2014).

Public interest groups, and in some cases, individual participants, make use of superior organizational skills and social networking to coordinate mass emailing

campaigns and form letter submissions as strategies to influence rulemakings. As discussed earlier in the chapter, the general consensus amongst scholars, however, is that mass commenting does little to influence rulemakings. Included in several of the proposed listing rules reviewed for this study was the FWS caveat that, "submitted comments merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination" (77 FR 60208, 2012; p. 60209). Additionally, regulations.gov states that agencies may exclude comments found to be "duplicate/near duplicate examples of a mass-mail campaign" from posting to the docket (regulations.gov, 2022).

As mentioned earlier in the chapter, the use of mass media to bring public awareness and to generate public attention to a specific issue, however, has proved a successful strategy to elicit more comment by public individuals (Soroko et al., 2015).

III. External Actor Participation and Influence in FWS ESA Rulemaking

Few studies examining the species listing rulemaking process were found in the literature. The majority of the ESA literature and studies are focused on the effectiveness of the ESA and the controversial nature of the Act. Rinfret (2011) analyzed the interest group influence during the pre-proposal stage of two FWS rulemakings: 1) to designate critical habitat for three species; and 2) to delist the Northern Rocky Gray Wolf population.[23] Analyzing the interview data obtained from agency personnel and stakeholders associated with each of the rules, Rinfret (2011) found interest groups were able to influence the drafting of the proposed rules, with the most successful groups

[23] Critical habitat designation rulemakings: 1) for Nebraska's Salt Creek Beetle; and 2) for Utah/Arizona Shivwits and Holmgren Milk Vetches

utilizing scientific expertise. As noted by Rinfret (2011), the scientific-based influence is not unexpected based on the value FWS places on scientific research for ESA rulemakings. Politics were also found to have played a role in the pre-proposal stage, as evidenced during the pre-proposal stage of the rulemaking to delist the Northern Rocky Gray Wolf population. Interestingly, interview findings indicated that respondents felt the states involved – Idaho, Montana, and Wyoming – had greater input into the development of the proposed delisting rule than the environmentalists who advocated for the wolves, or the ranchers who demonstrated a strong protectionist and anti-wolf viewpoint (Rinfret, 2011). The greater influence by the states was, in part, due to their respective wolf management plans being integral to the delisting. Several interview respondents concluded that the state of Wyoming was the most influential due to "political pressures from top-level officials within the USFWS" (Rinfret, 2011, p.9).

As part of Kamieniecki's (2006a, b) study discussed above, Kamieniecki also examined a FWS Gray Wolf rulemaking, analyzing the submitted comments for the proposed rule to amend the classification of the gray wolf. The FWS rulemaking sought to reclassify the species and delist all but four of the newly classified distinct population segments (DPS) of the gray wolf. The analysis found only minimal changes between the proposed rule and the final rule of the rulemaking, with citizen groups, along with state and local officials, submitting more comments than business groups or other organizations.[24]

Ando (1999, 2001, 2003) examined external actor influence during the preproposal stage and the notice and comment stage of the FWS listing rulemaking

[24] Proposed rule: 65 FR 43450; Final rule: 68 FR 15804

process in separate studies. Conducting a duration analysis, Ando (1999) analyzed the ESA listing data of species that were proposed for listing or had Candidate 1 status from 1990 to 1994 to evaluate the ability of interest groups to influence the timing of FWS listing decisions.[25] Findings indicated that exerted public opposition was able to substantially slow down a species' move from C1 to proposed listing, while public support was able to hasten the move forward from C1 to publication of a proposed listing for that species. Species encountering strong opposition, such as from pro-land-use groups, tended to "languish in the pipeline" (p. 48), with increasingly less chance of being listed. Ando (1999) also reported that public interest groups exerting pressure during the later notice and comment stage also had the ability to influence the listing rulemaking process. Findings indicated that opposing comments were able to slow down the listing process while supporting comments were able to speed up the process.

In another study, Ando (2001) looked at interest group comment activity for listing proposals from 1989-1994 to explore what role cost and benefits considerations have regarding the amount of effort interest groups exert in their attempts to influence a particular listing proposal. Findings indicated that proposed listings attract more opposition when opportunity costs are high, i.e., when the species or its habitat is in conflict with development or some economic activity (Ando, 2001). Support was found to be positively correlated with expected benefits of a listing, although Ando (2001)

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[25] From 1980 – 1995, FWS maintained two categories of species as candidates for listing. Species categorized as Candidate 1 (C1) were considered threatened or endangered by FWS but had yet to be proposed for listing. Candidate 2 (C2) species did not have sufficient information for a FWS conclusion of threatened or endangered, only warranting the conclusion that the species "might be" currently threatened or endangered. Periodically, the candidate species list would be published in the *Federal Register*, inviting public comment on the status.

voiced concerns that the some of the benefits of species perseveration were not always adequately represented in the rulemaking process.

For Ando's 2003 study, the researcher used data from proposed listings from 1989-1994 to investigate if interest groups strategically compete against each other in their attempts to influence the process. While interest groups were found to respond to the costs and benefits of the proposed listings, the results of the study did not find that the level of pressure exerted by one interest group increased or decreased based on the intensity of a competing interest group's pressure (Ando, 2003). As mentioned previously, in most instances, depending on the timing of submission, submitted comments are able to be viewed by other commenters during the notice and comment stage through the online rulemaking docket.

IV. Strategies Identified to Influence FWS ESA Rulemaking

Four major strategies used to influence listing rulemakings were identified from the literature which will inform the analysis for this study: 1) the use of science; 2) the use or threat of litigation, 3) the raising of economic considerations; and 4) the applying of political pressure. The four strategies are briefly discussed below.

a. Use of Science

The FWS requests new or additional scientific data and information from the public during the notice and comment stage. The agency uses a formal peer review process to "ensure the quality and credibility of the scientific information" used for rulemakings (U.S. Fish & Wildlife Service. Endangered Species, 2022, line 1; Wymyslo, 2009). New or additional scientific species data on a species is often the reason cited for a species being down listed from endangered to threatened in the final rule or the proposed

listing for a species being withdrawn in the final action. As discussed in Chapter 3, the decision of which species data are evaluated, and whether or not that data are sufficient for a listing determination, ultimately falls within the FWS's agency's delegated broad discretion, subject to judicial review (Doremus, 2004; Murphy & Weiland, 2016; Steen & Leverette, 2013; Weijerman et al., 2014). When asked during an informal 2017 discussion how a plaintiff opposing a species listing could dispute the scientific data warranting the listing, a key informant answered that the other side just brought in its "own" scientific data and science experts as a strategy. The underlying science behind an agency's listing decisions is also often the focus of opposing litigation (CRS, 2013, January 23; Holland, 2008; Ruhl, 2010; Wymyslo, 2009).

b. Litigation

The misuse, overreach, or abuse of FWS's discretionary authority is often cited as the grounds for litigation over FWS listing rulemakings (Evans et al., 2016; Ruhl, 2010; Salzman & Thompson, 2014; Scott et al., 2006). Under Section 11 of the ESA (16 U.S.C. § 1540(g)), citizens can challenge a species listing (or lack of listing), including the underlying data used for agency action, through the Court system (Brooks & O'Riodan,1990). Litigation through the Citizens Suit provision has been used to enforce ESA statutory deadlines, reducing listing delays (Glitzenstein, 2010; Greenwald et al., 2006; Langpap et al., 2018; Puckett et al., 2016; Salzman & Thompson, 2014). Legal settlements forcing agency action by the FWS have played a key role in species listings under the ESA (Greenwald et al., 2006). Just the threat of judicial review or litigation by those with opposing views can act as a powerful restraint or deterrent to agency rulemaking behavior (Kerwin & Furlong, 2011). One strategy reported as used by interest

groups in environmental rulemakings is to submit comments during the notice and comment stage to have standing to sue later if the rulemaking does not go their way (Rinfret, 2011; Wagner et al., 2011).

c. Raising of Economic Considerations

As discussed previously, economics is not to be considered for the actual listing process, however, economics has been reported as being considered in previous FWS listing rulemakings and is often at the center of controversies over proposed listing (Lieben,1997; Rinfret, 2011; Wilcove et al., 1993). Stakeholders and agency personnel have been reported as using a "fiscal feasibility" frame, during the pre-proposal stage of FWS rulemakings, discussing a preferred policy solution in terms of economic benefits, cost-benefit (Rinfret, 2011). Business and industry groups have been found to use economic information and/or data to raise economic concerns when opposing proposed listings or advocating for delistings.

d. Political Pressure

Political opposition and concerns over political repercussions of a proposed listed have been known to influence the listing, including delaying the listing (Greenwald et al., 2006; Puckett et al., 2016; Sidle, 1998). Political pressure from the impacted states was also reported as an influence in the rulemaking to delist the Northern Rock Gray Wolf populations (Rinfret, 2011). Over the years political appointees in the Department of the Interior and the FWS have been accused of meddling in scientific decision-making and using faulty science to achieve desired regulatory outcomes (Associated Press, 2021, Nov. 9; Congressional Research Service, 2013, January 23; Doremus, 2006; Kamieniecki, 2006a, b; Ruhl, 2010).

V. Conclusion

The federal rulemaking process is a critical venue for public policy decision making, and as such, is worthy of scholarly scrutiny (Warren, 2011; West, 2005). A review of the existing scholarship, however, found few studies examining the notice and comment stage of the ESA listing rulemaking process, and more specifically, the role public commenting plays on the use of agency discretion during listing determinations. The level of influence commenting has on the federal rulemaking is debated in the literature, with mixed findings reported in the studies reviewed. Commenters use various strategies and tactics, including: the use of technical expertise to submit new and additional technical information, or alternative options; the raising of economic or business concerns; the use of legal representation for commenting; and the use of mass commenting campaigns as well as the media to bring more public awareness and garner more public commenting. A review of the limited ESA listing-focused literature did identify four strategies used during the notice and comment stage of listing rulemakings in an attempt to influence the listing determination: 1) the use of science; 2) litigation, 3) the raising of economic considerations; and 4) political pressure

This study will narrow that knowledge gap by providing a deeper understanding of the FWS listing rulemaking process contributing to the federal rulemaking, administrative law, and ESA scholarship. For this study, the narrative comments included in the final rules or actions of 11 selected listing rulemakings will be coded for the type of issues raised by the commenters. The corresponding FWS responses will be coded for responsiveness to those issues, as a measure of commenting influence with respect to the

FWS use of agency discretion during its listing determinations. The next chapter details the analysis methodology used for this study.

CHAPTER 5: RESEARCH METHODOLOGY

I. Introduction

The goal of this research is to answer the research question, *which types of issues raised by commenters during the notice and comment stage can best influence the FWS's use of agency discretion during listing determinations?* The focus will be 11 selected ESA species listings during the Dan Ashe tenure as Director of the U.S. Fish and Wildlife Service (FWS) from June 30, 2011 to January 20, 2017. For this study, "species" refers to any species level of animal or plant, including full species, subspecies, or vertebrate distinct population segment (DPS), unless otherwise stated for the analysis or discussion.

As with previous studies (see Magat et al., 1986; Nixon et al., 2002; Shapiro, 2013; and Wagner et al., 2011) the "concept of influence" for this study was operationalized by content-coding the narrative comments and the FWS agency responses of the 11 listing rulemakings.

II. Research Design

A review of the federal rulemaking, the Public Administrative, and the Endangered Species Act (ESA) scholarship coupled with the informal discussions with seven key ESA informants conducted in the summer of 2017 guided the research methodology. The key informants offered expertise in the areas of ESA federal rulemaking, litigation, policy initiatives, and endangered species-specific scientific research and conservation. Five of the informants were chosen purposively and two as a result of snowball sampling (Babbie, 2013).

Following data collection, a series of samplings were done, as detailed below, to identify 71 completed FWS listing rulemakings during the timeframe of the study. As part of the sampling process, the 71 listing rulemakings were down-selected through a degree of change (etic) content analysis using a coding structure found in the literature (Golden, 1998; Kamieniecki, 2006b). A codebook was developed and refined for use during the degree of change content analysis for analysis rigor and reliability (see Appendix B). The narrative comments and corresponding FWS response were then analyzed using an emic/etic hybrid design approach. An emergent coding structure, partially informed by the rulemaking and ESA literature, was used to develop and refine a narrative comment codebook for the emic coding of the narrative comments analyzed (See Appendix C). The narrative comments were coded as to the type (theme) of the issue raised using the refined narrative comment codebook. A coding structure found in the literature (Magat et al., 1986; Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011) was then used when coding (etic) the FWS responses to each of the issues raised as a measurement of commenting influence.

The researcher was the sole coder of the data. Two codebooks were created. The first was used for the rulemaking down-selection process and the second for the narrative comment analysis. Each were developed and refined through an iterative process as a means to increase content analysis rigor and reliability. The analysis results were synthesized using an administrative law lens to gain a better understanding of the use of FWS agency discretion. A summary diagram of the study's research design is found in Figure 5.1.

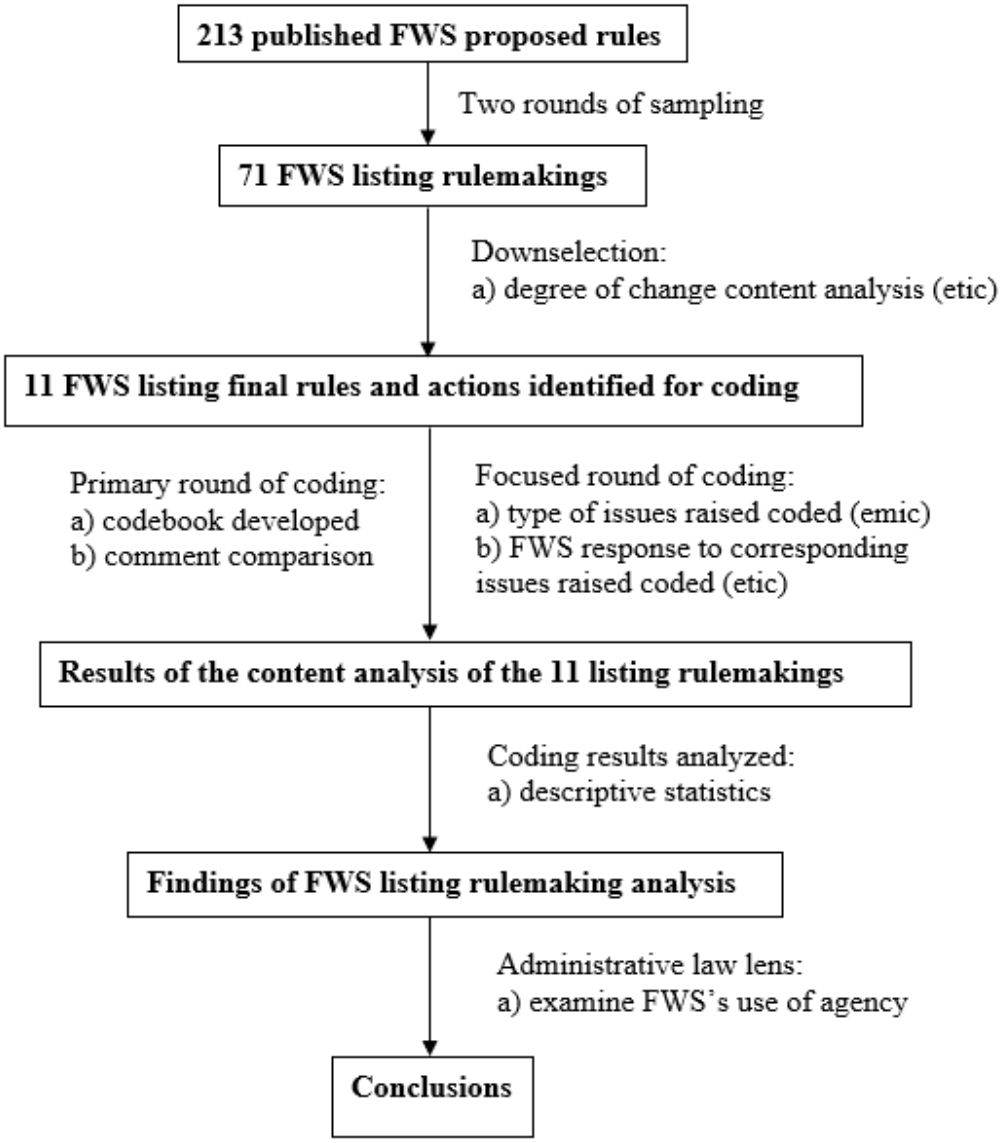

Figure 5.1 Research Design

a. Study Population

As previously discussed, the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) are the two agencies charged with implementing the Endangered Species Act. The FWS was selected as the agency of focus for this study as it is considered the "principal agency" for implementation of the ESA,

being responsible for 15 times more species than the NMFS (Lowell & Kelly, 2016; Salzman & Thompson, 2014, p. 291).

b. Units of Analysis

The unit of analysis for this study is FWS completed listing rulemakings. Both the proposed listing rule and the final listing rule/action of the rulemakings were obtained and reviewed for this study. The units of observation are the narrative comments, the corresponding FWS responses, and the submitted comments from the rulemaking dockets of the three listing rulemakings reviewed in the cursory comment comparison.

III. Data Collection

a. Timeframe of Analysis

The study examined the FWS listing proposed and subsequently completed rulemakings from June 30, 2011 to January 20, 2017. This was selected to analyze ESA rulemakings published under the leadership, direction, and discretionary authority of FWS Director, Dan Ashe. Shapiro (2008) similarly selected proposed and finalized rules during a single presidential administration to "eliminate the possible confounding variable of administration change" (p. 10), as did Golden (1998). During the study period there were 71 completed listing rulemakings. For this study a "completed" rulemaking is one that ended within the selected timeframe, either by publication of a final rule, or the withdrawal of the proposed rule through a published final action.

b. Data Sources

Data were collected through online searches of the *Federal Register* (Federalregister.gov) and the *Unified Agenda* (Reginfo.gov, Regulations.gov). Proposed and final rules are published in the *Federal Register* and the regulatory action timeline for

the proposed rule is available through the *Unified Agenda*. Submitted comments used for the cursory comment comparison (see below) were obtained from the online rulemaking dockets at, *regulations.gov*, using the rulemaking docket number provided in the proposed rule or final rule/action document. The narrative comments and corresponding FWS responses comprising the dataset used in the analysis were obtained from within the final rule or final action published documents.

c. Sampling Protocol

An advanced search of the online *Federal Register* found 212 proposed rules published by the U.S. Fish and Wildlife Service (FWS) under the topic of "Endangered and Threatened Species" from June 30, 2011 – January 20, 2017. A second *Federal Register* advanced search using the document type of "Rule" instead of "Proposed Rule" found one additional FWS rulemaking meeting the study selection criteria. The additional rulemaking's proposed rule and final rule/action were added to the FWS rulemaking dataset for a total of 213.

A preliminary review and categorization of the 213 proposed rules' regulatory actions identified 86 proposed rules for listing species. This categorization was double-checked for accuracy. Each of the 86 proposed rules for listing had a Regulation Identifier Number (RIN) found in the *Federal Register*. The timelines of the identified 86 rulemakings were then reviewed with the online *Unified Agenda* using the RINs. This step identified which of the 86 rulemakings were completed in the study timeframe. Of the 86 rulemakings, 71 were identified as having published final rules or actions by January 20, 2017 and selected for the degree of change analysis. The remaining 15 were excluded due to their timing.

The 71 rulemakings were further down-selected through a degree of change content analysis. The analysis selected rulemakings whose listing regulatory action had changed a "great deal" from the proposed rule to the final rule/action during the notice and comment stage of the rulemaking process.

Only rulemakings in which one or more of the proposed species listings had been down-listed from endangered status to threatened status in the final rule, or the listing proposal was withdrawn for one or more of the species in the final action, met the criteria for a degree of change of "a great deal" (See Table 5.1). The degree of content change analysis utilized methodology used by Golden (1998) and Kamieniecki (2006a, b). The following sections were reviewed comparatively for the degree of change determination: 1) The "Summary", found in the proposed rule and final rule/action preambles; 2) the "Executive Summary", if present, in the proposed rule and final rule/action; and 3) the "Summary of Changes from the Proposed Rule", if present, in the published final rule/action. The degree of change codebook can be found in Appendix B.

Table 5.1 Degree of Change Criteria Summary

Degree of Change Categories	Criteria Summary
"None"	No change between the proposed rule and final rule listing action Ex.: A species proposed to be listed as endangered is listed as endangered in the final rule
"Minimal"	Minimal changes to the final rule, but listed as proposed Ex.: A clarification or correction is made in the final rule
"Some"	Still listed as proposed, but a change to the substance of the listing action is made Ex.: The addition of a Special 4(d) Rule for a threatened species listing which then weakens the strength of the proposed listing as threatened in the final rule
"A Great Deal"	Proposed listing is down-listed or withdrawn for one or more of the species in the final rule/action Ex.: A species proposed as endangered is listed as threatened in the final rule Ex.: A proposed listing is withdrawn, resulting in the species not being listed

In total, 13 rulemakings of the 71 were categorized as having a "Great Deal" degree of change, thereby meeting the criteria for commenting content analysis. The remaining 58 rulemakings were removed from the analysis. After a subsequent review of the 13 selected rulemakings, two more were excluded: the African lion, and the four salamanders. The African lion listing determination was made by a separate branch of the FWS. The listing determination for the four salamanders was split, with the determination

for two of the salamanders made after a 6-month extension and reopening of commenting which no longer met the selection criteria for the study.

A summary diagram of the sampling process is found in Figure 5.2. Table 5.2 lists the 11 listing rulemakings selected for commenting content analysis.

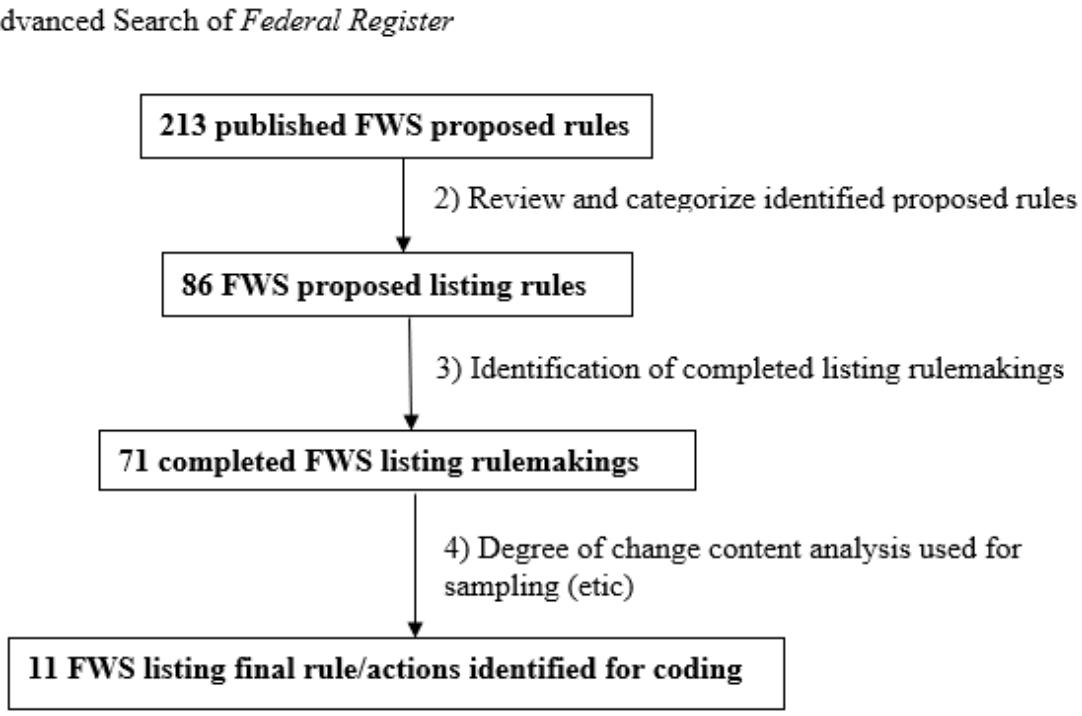

Figure 5.2 Rulemaking Sampling Process

Table 5.2 Final Study Sample

Referred to as	Proposed Rule	Final Rule	Number of Narrative Comments with FWS Response	"Comments Received" as reported in FR/FA	Comments Found in Rulemaking Docket	Rulemaking Outcome
Eight Mussels	76 FR 61481	77 FR 61664	28	10	10	Final Rule, but weakened
Six Butterflies	77 FR 59518	78 FR 57749	23	43	43	Final Rule, but weakened
Tiger Beetle	77 FR 60207	78 FR 61081	61	1,163	353	Withdrawn
Gunnison Sage-Grouse	78 FR 2485	79 FR 69192	194	696	656	Final Rule, but weakened
Wolverine	78 FR 7863	79 FR 47522	70	121,271	12,443	Withdrawn
Two Beardtongues	78 FR 47590	79 FR 46042	110	4,939	80	Withdrawn
Northern Long-Eared Bat	78 FR 61045	80 FR 17974	76	144,158	3,775	Final Rule, but weakened
Greater Sage-Grouse	78 FR 64357	80 FR 22828	46	275	273	Withdrawn
Guam and Mariana Islands	79 FR 59363	80 FR 59424	98	19	18	Final Rule, but weakened
Fisher	79 FR 60419	81 FR 22709	309	42,988	465	Withdrawn
Two Crayfish	80 FR 18709	82 FR 20449	38	42,027	48	Final Rule, but weakened

Highlighted rulemakings used in cursory comparison for representativeness (Magat, et al., 1986)

d. Data Collection

To check for narrative comment representativeness (see Magat et. al, 1986), submitted comments of the three rulemakings with the lowest number of submitted comments as well as the lowest number of "comments received", as highlighted in Table

5.2, were collected from their respective decision-making dockets These rulemakings were chosen for the comparison in an effort to keep the data more manageable.

Two forms of data were collected for the final sample of 11 species rulemakings used for the analysis: the narrative comments and the corresponding agency responses.[26] Both were obtained from the preambles of the published final rules/actions for each of the 11 rulemakings. These documents provided the 1,053 narrative comments 1,052 corresponding FWS responses for analysis. One one-sentence narrative comment did not have a corresponding FWS response.

IV. Analysis

Prior to the analysis of the 11 rulemakings, the narrative comments of three rulemaking were first subjected to a cursory comparison with their respective submitted comments found in their online rulemaking dockets (see Table 5.2), as previously done by Magat et al. (1986), and referenced by previous studies (Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011). The narrative comments were reviewed comparatively with the submitted comments for accuracy, representativeness, consistency, and completeness (Magat et al. 1986).[27] The comparison was performed to ensure the issues raised in the narrative comments were representative of the issues raised in the submitted comments. Similar to Magat et al.'s (1986) findings, the major points/issues raised in the submitted

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[26] For clarification, in the literature, narrative comments are also referred to as "references to comments" (Nixon et al., 2002, p. 64); "significant comments" (Magat et al., 1986, p. 145; Wagner et al., 2011, p. 19); and "observations", defined as "an issue raised by one or more commenters" (Shapiro, 2013, p. 12). The FWS uses "narrative comments" so that is the terminology used for this study.

[27] For a set of EPA regulations, Magat et al. (1986) compared the arguments chosen by the EPA to present in the published rulemakings in the *Federal Register* to the actual submitted comments for the selected EPA rulemakings and found that the major points made in the submitted comments were well-represented in published EPA rulemaking notices.

comments for the three reviewed rulemakings "appeared to be well represented" in the narrative comments found within the final rules (p. 145, n.6).

The analysis of the selected 11 listing rulemakings involved two rounds of coding.

a. Primary Round of Coding

The narrative comments of the 11 selected rulemakings were first coded by hand on hard copies of the final rule/action documents. The first step identified themes with respect to the issue(s) raised within the narrative comments. If more than one issue was raised within a narrative comment then each issue was coded separately. This process identified 1,446 issues in the 1,053 narrative comments and 16 emergent themes of issues raised by the commenters (see Table 5.3). Secondly, general themes around the comments' support of the proposed listing were identified. These were 1) supportive of the proposed listing; 2) critical of the proposed listing; and 3) neutral or not determinable. Results from this coding process were placed in a spreadsheet for further analysis. A narrative comment codebook was developed during the primary round of coding (see Appendix C).

b. Focused Round of Coding

The narrative comment codebook was refined by reducing the 16 primary codes to 7 secondary codes through an iterative process to reduce data (see Table 5.3).

Table 5.3 Emergent Theme Primary and Focused Codes

Primary Codes	Focused Codes
1. Clarification 2. Correction	1. Clarification and Correction
3. Procedural 4. ESA Implementation	2. Procedural
5. Underlying Science 6. Underlying Science Methodology	3. Underlying Science/Methodology
7. New Science 8. Additional Science	4. New and Additional Science
9. Critical Habitat Designation	5. Critical Habitat Designation
10. Economic 11. Business and Industry 12. Recreation 13. Military Infrastructure and Development	6. Economic, Business, and Industry
14. Legal 15. Regulatory Mechanisms 16. Conservation Efforts	7. Legal, Existing Regulatory, and Conservation Efforts

The seven focused codes were then used to categorize each of the raised issues. Each of the raised issues in the narrative comments were coded using the refined narrative comment codebook to categorize the type of issue raised. The issues were also coded as to whether the commenters wanted a change or addition to the proposed listing documents. Of the 1,446 issues raised, 1,236 were identified as wanting a change or

addition to one of the listing documents, such as the correction of a species' common name or the inclusion of new or additional survey data. The corresponding FWS responses for those 1,236 issues were coded for FWS responsiveness to the issues raised, using the coding schema of previous studies as a measurement of commenting influence (Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011). The analysis is further detailed in the next chapter, including a discussion of how coding conflicts and missing data were addressed.

The results of the analysis were compared using percentages similar to previous studies (Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011).

V. IRB Review and Approval

The research protocol used for the informal discussions with key informants was approved by the Boise State University Institutional Review Board (IRB). Remaining data were publicly available and exempt from IRB review and approval.

VI. Summary

The chapter offered a description of the study's research design and detailed the data collection. Of the 213 ESA published proposed rules by the U.S. Fish and Wildlife Service collected, 86 were identified as listing rulemakings with 71 of those identified as completed within the specified study timeframe. The 71 rulemakings were downselected to 11 through a degree of change analysis methodology used in previous studies (Golden, 1998; Kamieniecki, 2006a, b). The next chapter further details the analysis and reports the results.

CHAPTER 6: ANALYSIS AND RESULTS

I. Introduction

The narrative comments and the corresponding FWS responses of 11 listing rulemakings were analyzed to gain insight into how the issues raised by commenters during the notice and comment stage can influence the U.S. Fish and Wildlife Service's (FWS) listing determinations. Two sources of data are used for this study: 1) the text of the final rule/action; and 2) the rulemaking's decision-making docket. The text of the final rule and final action contains the narrative comments and the FWS responses. As noted previously, a single submitted comment can raise more than one issue of concern or significance (77 FR 61664, p. 61674). The decision-making docket serves as the repository for the rulemaking's official written record, including submitted comments, and is the record upon which the rule is reviewed by the courts during any subsequent litigation (Balla & Daniels, 2007; Wagner et al., 2011).

In the "Summary of Comments and Recommendations" Section of the final rule/action preamble, the FWS divides issues from the submitted comments into a set of narrative comments, which provides a description of each issue raised. For clarification, an issue is defined as something a commenter wanted FWS to be aware of and consider when making its listing determination. As required by the Administrative Procedure Act (APA), the FWS must address significant issues raised by commenters during the notice and comment stage and provide a response in the published final rule or action

(Administrative Procedure Act, 5 U.S.C. § 553(c)).[28] The following are two examples of narrative comments and their corresponding FWS responses:

> 1) Narrative Comment (25): "One commenter stated that more State-specific data are needed considering the ambiguity and divergence across the range of the northern long-eared bat".
>
> FWS Response: "The Act requires us to make a determination using the best available scientific and commercial data after conducting a review of the status of the species" (80 FR 17974, 2015, p. 18010).
>
> 2) Narrative Comment (9): "…The VDGIF also provided information on an occurrence location within the Russell Fork watershed that we were unaware of and noted two locations in the upper Levisa Fork watershed from which the species appears to have been extirpated".
>
> FWS Response: "We appreciate the VDGIF's additional data on Big Sandy crayfish occurrence locations in Virginia, and we have incorporated this information into this final rule" (81 FR 20450, 2016, p. 20452).

As previously detailed in Chapter 5, the dataset was comprised of the 1053 narrative comments and the corresponding FWS responses collected from 11 listing rulemakings. There were 1446 issues raised by commenters identified in the 1053 narrative comments (Table 6.1). The focused content analysis of the 1053 comments consisted of two main steps. The first step analyzed the comments for the issues of concern and suggested request for change. The second step evaluated the comment's influence on the FWS by coding the FWS response drawing from a coda schema used previously (Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011).

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[28] The Administrative Procedure Act (APA) requires that any agency promulgating a final rule include a summary and response section in the final rule/action to address comments on the rulemaking received by the agency (Administrative Procedure Act, 5 U.S.C. § 553(c)). Section 553 of APA does not require an agency to include a response to every comment received in the final rule, but in 2015, the U.S Supreme Court held, "An agency must consider and respond to significant comments received during the period for public comment." (*Perez v. Mortg. Bankers Ass'n*, 575 U.S.,135 S. Ct. 1199, 1203 (2015).

II. Analysis

a. Analysis of the 1,053 Narrative Comments

Following the methodology of previous studies (Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011), the analysis was a cumulation across the selected issues. As stated in the previous chapter, the 1053 comments went through two rounds of coding. A primary round determined the number of issues raised and their emergent categorization themes. The second round consisted of focused coding to place the issues in general themes, or categories; to identify requested changes or additions to the proposed listing documents, and to measure the FWS response to those requested changes. The next section provides explanatory examples for each code and addresses the resolution of coding conflicts.

1. Focused Coding Examples

Issues were coded "clarification and correction" if the commenter want a clarification or a correction to the information or text of one of the proposed listing documents. For example,

> "One peer reviewer commented that many of the Chamorro names of the animals and plants listed in the proposed rule either do not conform to accepted orthography of the language or appear incorrect, and provided corrections for select species" (80 FR 59424, 2015, p. 59472).

Issues coded for "procedural" questioned a procedure followed during the listing process, or requested that an additional procedure be followed by FWS. As an example:

> "One commenter stated that the listing of the five additional butterfly species on the basis of the similarity of appearance should only prohibit their collection, and not extend to otherwise lawful activities" (78 FR 57750, 2013, p. 57761).

Issues were coded "underlying science/methodology" when the issue raised concerns or questions regarding the underlying science used for the listing, or the methodology used by FWS when analyzing the science for the listing determination. For example,

> "One State disagreed with our determination in the proposed rule that wolverine genetic variation is low, or lower than historical levels, in the northern Rocky Mountain wolverine population" (79 FR 47522, 2014, p. 47529).

Issues coded for "new and additional science" raised the issue of relevant new or additional science not used in the proposed listing. As an example,

> "The VDGIF also provided information on an occurrence location within the Russell Fork watershed that we were unaware of and noted two locations in the upper Levisa Fork watershed from which the species appears to have been extirpated" (81 FR 20450, 2016, p. 20452).

In some cases, the narrative comments included mention of specific citations provided, but in other cases the coding relied on the FWS response acknowledging the commenters had provided new or additional science in their submitted comments.

Issues coded for "critical habitat designation" specifically referenced critical habitat designation, not species habitat or range which was coded as a science related issue. As an example,

> "The commenters stated that the area proposed as designated critical habitat includes the entirety of the northern 80 percent of the CPSD geologic feature, but much of this area does not currently support the CPSD tiger beetle. They requested an explanation of why the entirety of this area was proposed as critical habitat" (78 FR 61082, 2013, p. 61093).

While only two of the proposed listings included a current proposal for critical habitat designation, eight of the proposed listings received comments raising issues about critical habitat.

Issues were coded for "economic, business, and industry" when raising concerns about economic impacts or referencing implications of the listing for business and industries operating in the impacted areas. For example,

> "Since the Tribe is a major energy producer, they are concerned that the proposed actions will affect the economy and interests of the Tribe by significantly impacting oil and gas development on their Reservation" (79 FR 46042, 2014, p. 46052).

Recreation-related comments and forest and vegetation management comments were also included in this category as revenue generators for the companies involved and the local economies.

Issues coded as "legal, existing regulatory mechanisms, and conservation efforts" included those refencing other regulations which the commenters thought superseded the ESA are should at least be considered. Issues stating ongoing or future conservation efforts, such as conservation agreements, or other suggestions for conservation efforts, which preempted the need for listing, were also coded as such. Also included in this category were issues raising specific legal arguments as to why the listing rulemaking was not lawful, from the perspective of the commenter(s); or issues claiming the proposed listing was only in response to a court approved settlement. As an example,

> "Several commenters stated that conservation easements, CCAs, and CCAAs protect Gunnison sage-grouse, either directly or through protection of sagebrush habitat" (79 FR 69192, 2014, p. 69221).

In the approximately 40 cases where the issue was not clear, its corresponding FWS response informed the coding.

2. Coding Conflicts

There were three issue areas identified as conflicting. The following details these and the process to address the conflicts.

1) Issues raised regarding the underlying science or species information, but also offering additional information relative to the underlying science, were coded as underlying science.
2) Issues raised requesting a clarification/correction of the underlying science or information were coded as clarification/correction, not as underlying science.
3) Issues raising economic/industry/business questions or concerns with a referencing of underlying science, or critical habitat impacts, etc. were consistently coded as economic/industry/business.

b. Analysis of the FWS Responses to the Issues Raised

Each FWS response was coded (etic) as being: a) either positive/agrees; b) negative/disagrees; or c) neutral/not determinable/not addressed following a coding schema used in previous studies (Magat et al., 1986; Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011) to assess the comments' influence on the FWS. The coding of the FWS response was done immediately following the coding of the associated issue raised in the respective narrative comment. If the FWS response indicated a change made in response to the issue raised it was coded as "positive/agree". The response was coded as "negative/disagree" if the FWS stated disagreement or indicated it did not make the

desired change. Of the 1446 issues, 210 did not include a request for change. Issues that did not include a request were excluded from the FWS responsiveness analysis for the study.

III. Results from the Narrative Comment and FWS Response Analysis

a. Types of Issues Raised by Commenters

Results for the type of issues raised in the narrative comments are presented in Tables 6.1. The data indicates the number of issues raised found within the narrative comments, and the theme they were placed (Table 6.2).

Table 6.1 Number of Narrative Comments and Issues Raised

Rulemaking Species	Final Rule or Action	Number of Narrative Comments	Number of Issues Raised
Eight Mussels	77 FR 61664	28	36
Six Butterflies	78 FR 57750	23	29
Tiger Beetle	78 FR 61082	61	80
Gunnison Sage-Grouse	79 FR 69192	194	240
Wolverine	79 FR 47522	70	77
Two Beardtongues	79 FR 46042	110	159
Northern Long-Eared Bat	80 FR 17974	76	94
Greater Sage-Grouse	80 FR 22828	46	66
23 Guam and Mariana Islands Species	80 FR 59424	98	149
Fisher	81 FR 22710	309	459
Two Crayfish	81 FR 20450	38	57
	Totals	**1,053**	**1,446**

Of the 11 proposed rules, the number of narrative comments varied. The majority of narrative comments were for the West Coast Fisher. Within those narrative comments, there were 459 issues raised. The six butterflies, however, had both the smallest number of comments and issues raised. The majority of the issues (33.7%) were concerning the underlying science and methodology used in the proposed listing.

Table 6.2 Types of Issues Raised in Narrative Comments

Rulemaking Species	Issue Raised						
	Clarification/Correction	Procedural	Underlying Science/Methodology	New/Additional Species Data/Information	Critical Habitat Designation	Economic/Industry/Business	Legal/Existing Regulatory Mechanisms/Conservation Efforts
Eight Mussels	4 (11.1%)	0 (0.0%)	7 (19.4%)	4 (11.1%)	8 (22.2%)	11 (30.6%)	2 (5.6%)
Six Butterflies	0 (0.0%)	6 (20.7%)	9 (31.0%)	9 (31.0%)	3 (10.3%)	2 (6.9%)	0 (0.0%)
Tiger Beetle	4 (5.0%)	10 (12.5%)	15 (18.8%)	4 (5.0%)	10 (12.5%)	24 (30.0%)	13 (16.3%)
Gunnison Sag-Grouse	12 (5.0%)	11 (4.6%)	88 (36.7%)	22 (9.2%)	2 (0.8%)	60 (25.0%)	45 (18.8%)
Wolverine	2 (2.6%)	9 (11.7%)	35 (45.5%)	10 (13.0%)	0 (0.0%)	18 (23.4%)	3 (3.9%)
Two Beardtongues	8 (5.0%)	22 (13.6%)	53 (33.3%)	38 (23.9%)	0 (0.0%)	14 (8.8%)	24 (15.1%)
Northern-Eared Bat	2 (2.6%)	19 (20.2%)	43 (45.7%)	14 (14.9%)	0 (0.0%)	9 (9.6%)	7 (7.4%)
Greater Sage-Grouse	4 (6.1%)	3 (34.5%)	10 (15.2%)	6 (9.1%)	1 (1.5%)	28 (42.4%)	14 (21.1%)
23 Guam and Mariana Island Species	12 (8.1%)	19 (12.8%)	48 (32.2%)	47 (31.5%)	3 (2.0%)	7 (4.7%)	13 (8.7%)
Fisher	23 (5.0%)	18 (3.9%)	159 (34.6%)	63 (13.7%)	5 (1.1%)	147 (32.0%)	44 (9.6%)
Two Crayfish	1 (1.8%)	7 (12.3%)	20 (35.1%)	13 (22.8%)	1 (1.8%)	10 (17.5%)	5 (8.8%)
Totals	**72 (5.0%)**	**124 (8.6%)**	**487 (33.7%)**	**230 (15.9%)**	**33 (2.3%)**	**330 (22.8%)**	**170 (11.8%)**

b. Commenter Support and Requested Change

Results show few issues raised expressed clear support or opposition to the listing (Table 6.3). Of the 1446 issues raised, 86.4% were neutral or non-determinable. The species that received the most support was the freshwater mussels (22%). The species the commenters were most critical was the Greater Sage-Grouse (15.2%).

Table 6.3 Comments Support of Listing

Rulemaking Species	View on Listing		
	Supportive	Neutral/NotExpressed/Not Determinable	Critical
Eight Mussels	8 (22.2%)	26 (72.2%)	2 (5.6%)
Six Butterflies	0 (0.0%)	28 (96.6%)	1 (3.4%)
Tiger Beetle	4 (5.0%)	71 (88.8%)	5 6.3%)
Gunnison Sage-Grouse	2 (0.8%)	227 (94.6%)	11 (4.6%)
Wolverine	0 (0.0%)	71 (92.2%)	6 (7.8%)
Two Beardtongues	11 (6.9%)	130 (81.8%)	18 (11.3%)
Northern Long-Eared Bat	4 (4.3%)	76 (80.9%)	14 (14.9%)
Greater Sage-Grouse	0 (0.0%)	56 (84.8%)	10 (15.2%)
23 Guam and Mariana Island Species	20 (13.4%)	121 (81.2%)	8 (5.4%)
Fisher	25 (5.4%)	393 (85.6%)	41 (8.9%)
Two Crayfish	3 (5.3%)	50 (87.7%)	4 (7.0%)
Total	**77 (5.3%)**	**1249 (86.4%)**	**120 (8.3%)**

c. FWS Responsiveness to Comment

The FWS response to requested changes for the listing documents were analyzed as the measurement of commenting influence, as presented in Table 6.4. The first data column gives the number and percentage of the total number of issues raised which requested a change for each of the rulemakings. The three columns under the FWS Response indicate the type of response for each rulemaking. The analysis included the 1236 out of the 1446 issues raised, 85.7%, of which included a request for a change or addition to the proposed listing documents. The FWS disagreed or had a negative response in all but the Gunnison Sage Grouse (43%) and the Guam and Marianna Island species (37.3%). The only listing where the FWS agreed with the majority of suggested changes were those in the Guam and Marianna Island species listing (58.2%). As shown in Table 6.4, only 37.1% of the issues raised influenced the FWS to make the requested commenter change. Of note was that every issue raised for the proposed Wolverine listing included a request for a change or addition to the proposed listing documents.

Table 6.4 FWS Responsiveness to Requested Change

Rulemaking Species	Wants Change/Addition to Listing Documents	FWS Response		
		Positive Response/Agrees	Negative Response/Disagrees	Neutral/Not Addressed/Not Determinable
Eight Mussels	29(70.6%)	12(41.4%)	17 (58.6%)	0 (0.0%)
Six Butterflies	22(75.9%)	8(36.4%)	13 (59.1%)	1 (4.5%)
Tiger Beetle	60(75.0%)	20(33.3%)	30 (59.1%)	10 16.7%)
Gunnison Sage-Grouse	214(89.2%)	97(45.3%)	92 (43.0%)	25 (11.7%)
Wolverine	77(100.0%)	18(23.4%)	55 (71.4%)	4 (5.2%)
Two Beardtongues	127(80.4%)	37(29.1%)	76 (59.8%)	14 (11.0%)
Northern Long-Eared Bat	82(89.1%)	21(25.6%)	61 (74.4%)	1 (1.2%)
Greater Sage-Grouse	65(98.5%)	24(36.9%)	35 (53.8%)	6 (9.2%)
23 Guam and Mariana Islands Species	110(73.8%)	64(58.2%)	41 (37.3%)	5 (4.5%)
Fisher	404(88.0%)	147(36.4%)	218(54.0%)	39 (9.7%)
Two Crayfish	46(80.7%)	11(23.9%)	30 (65.2%)	5 (10.9%)
Totals	**1236(85.7%)**	**459(37.1%)**	**668(54.0%)**	**109 (8.8%)**

d. FWS Responsiveness to Type of Issue Raised

To provide more insight into the influence of the commenting, Table 6.5 looks at the FWS response to each of the seven types of issue raised. Issues raising the need for clarification and a correction elicited the highest level of FWS responsiveness (70.6%). This was followed by new and additional information (54.3%). The FWS disagreed or had a negative response to the remaining five categories.

Table 6.5 FWS Responsiveness to Type of Issue Raised

Type of Issue Raised	Number of Issues Raised	FWS Response		
		Positive/Agrees	Negative/Disagrees	Neutral/Not Addressed/Not Determinable
Clarification/Correction	68	48(70.6%)	19 (27.9%)	1(1.5%)
Procedural	52	6(11.5%)	41 (78.8%)	5(9.6%)
Underlying Science/Information	43	129(29.5%)	281(64.0%)	29(6.6%)
New and Additional Information	22	121(54.3%)	84 (37.7%)	18(8.1%)
Critical Habitat	24	8(33.3%)	13 (54.2%)	3(12.5%)
Economy/Industry/Business	29	97(32.4%)	163(51.1%)	39(13.0%)
Legal/Existing Regulatory/Conservation	13	50(38.2%)	67 (51.1%)	14(10.7%)
Totals	1236	459(37.1%)	668(54.0%)	109(8.8%)

e. Science versus Business Commenting

Table 6.6 compares the total number of science issues raised with the number of total economic/industry/business issues raised. Out of the 1446 issues raised, half were concerned about the species science and data. Issues with economic impact and business were 22.8% of the total comments. Table 6.7 compares the FWS responsiveness to the total number of science issues raised desiring a change or addition to those of the business issues raised, with science issues only having a slightly higher FWS responsiveness (37.8%) than for business issues (32.4%).

Table 6.6 Science versus Business Commenting

Types of Issues Raised	Number of Issues Raised	Percentage of Total Issues Raised
Clarification/Correction	72	5.0
Science (Underlying & New and Additional)	717	49.6
Economic/Industry/Business	330	22.8
Procedural & Legal/Existing Regulatory/Conservation	294	20.3
Critical Habitat	33	2.3
Totals	**1446**	**100.0**

Table 6.7 FWS Responsiveness Science versus Business Commenting

Types of Issues Raised	Number of Issues Raised	FWS Responsiveness
Clarification/Correction	68	70.6%
Science (Underlying & New and Additional)	662	37.8%
Economic/Industry/Business	299	32.4%
Procedural & Legal/Existing Regulatory/Conservation	183	30.6%
Critical Habitat	24	33.3%
Totals	**1236**	

IV. Use of Agency Discretion: Individual FWS Analysis Response Findings

In additional to the study's cumulative results shedding light on the FWS's use of agency discretion during listing determinations, results from the individual FWS responses also provided valuable insight into the FWS's use of discretion by providing an occasional glimpse into how the FWS perceives its discretionary authority. Most of the statements made by the FWS in its responses regarding the extent of its discretionary authority were just reiterations of well-known limits, such as not being able to consider

economics for listings. A few of the FWS responses, however, did serve as instructive clarifications, as illustrated by the following four examples:

1) Species rarity does not always warrant listing, as clarified in the FWS response to narrative comment 105 of the Beardtongues rulemaking,

> "A species that has always been rare, yet continues to thrive, could well be equipped to continue to exist into the future…. Consequently, the fact that a species is rare does not necessarily indicate that it may be in danger of extinction in the foreseeable future" (79 FR 46042, 2014, p. 46065).

2) FWS consideration of species population density and size alone is not sufficient for listing determinations, as stated in the FWS response to narrative comment 51 of the North American Wolverine listing,

> "Listing under the Act is predicated not on population densities and size, but rather on whether the species (here DPS) meets the definition of endangered or threatened because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence" (79 FR 47522, 2014, p. 47530).

3) Whether or not the listing of a species will ultimately lead to its recovery or will ameliorate the threats to the species is not a consideration during the listing process, as clarified by the following FWS responses:

> a) In response to narrative comment 6 of the Northern Long-eared Bat,
>
> "Whether a species is ultimately recoverable is not something we consider when listing species; we are obligated to list species under the Act if they meet the definition of an endangered or a threatened species" (80 FR 12974, 2015, p. 18007).
>
> b) In response to narrative comment 165 of the West Coast Fisher listing,
>
> "The analysis is strictly a biological analysis; whether the Act can make a difference in ameliorating specific threats is not a consideration in a listing determination" (81 FR 22710, 2016, p. 22771).

4) The IUCN Red List, widely used as a measure of the global extinction risk of species, does not factor into FWS listing determinations. In response to two commenters for the Gunnison Sage-Grouse listing asserting that the IUCN influenced the decision-making process for the listing, the FWS clarified,

> "The IUCN does not influence our decision-making process. We provided information on IUCN's ranking of the species for background only; these assessments are not factored into our analysis or listing determination in this rule" (79 FR 69192, 2014, p. 69225).

V. Listing Outcomes of the 11 Rulemakings

As discussed in the previous chapter, the degree of change analysis identified 13 rulemakings which whose listing regulatory actions had changed "a great deal" from proposal to final rule/action, 11 of which analyzed for this study. Of the 11 listing rulemakings analyzed, six were found to have had their proposed listing regulatory action weakened prior to finalization and 5 saw their proposed listing rule withdrawn. This section provides a summary of those results (See Appendix D for more detail).

a. Weakened Listings

1. Eight Mussels

Proposed rule, 76 FR 61481: *Endangered and Threatened Wildlife and Plants; Endangered Status for the Alabama Pearlshell, Round Ebonyshell, Southern Sandshell, Southern Kidneyshell, and Choctaw Bean, and Threatened Status for the Tapered Pigtoe, Narrow Pigtoe, and Fuzzy Pigtoe; With Critical Habitat*. The final rule (77 FR 61664) determined endangered species status for the Alabama pearlshell, round ebonyshell, southern kidneyshell, and Choctaw bean, and threatened species status for the tapered pigtoe, narrow pigtoe, southern sandshell, and fuzzy pigtoe, and designated critical

habitat for the eight mussel species. The proposed rule listing action was weakened from endangered status to threatened status for the southern sandshell (*Hamiota australis*).

2. Six Butterflies

Proposed rule, 77 FR 59518: *Endangered and Threatened Wildlife and Plants; Proposed Listing of the Mount Charleston Blue Butterfly as Endangered and Proposed Listing of Five Blue Butterflies as Threatened Due to Similarity of Appearance*. The final rule (78 FR 57750) determined endangered species status under the Endangered Species (ESA) for the Mount Charleston blue butterfly. The proposed threatened listing statuses for the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and two Spring Mountains dark blue butterflies based on similarity of appearance to the Mount Charleston blue butterfly were not finalized, resulting in the overall proposed listing regulatory action being weakened.

3. Gunnison Sage-Grouse

Proposed rule, 78 FR 2485: *Endangered and Threatened Wildlife and Plants; Endangered Status for Gunnison Sage-Grouse*. The final rule (79 FR 69192) determined threatened species status under the Endangered Species Act (ESA) for the Gunnison sage- grouse (*Centrocercus minimus*). FWS determined threatened status, rather than endangered status, for the Gunnison sage- grouse, resulting in a weakening of the proposed listing regulatory action.

4. Northern Long-Eared Bat

Proposed rule, 78 FR 61045: *Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the Eastern Small-Footed Bat and the Northern Long-Eared Bat as Endangered or Threatened Species; Listing the Northern Long-Eared*

Bat as an Endangered Species. The final rule (80 FR 17974) determined threatened species status under the Endangered Species Act (ESA) for the northern long-eared bat (*Myotis septentrionalis*), resulting in a weakening of the proposed listing regulatory action.

5. 23 Guam and Marina Islands Species

Proposed rule, 79 FR 59363: *Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for 21 Species and Proposed Threatened Status for 2 Species in Guam and the Commonwealth of the Northern Mariana Islands*. The final rule (80 FR 59424) determined endangered status under the Endangered Species Act (ESA) for 16 plant and animal species from the Mariana Islands (the U.S. Territory of Guam and the U.S. Commonwealth of the Northern Mariana Islands) and threatened status for seven plant species from the Mariana Islands and greater Micronesia in the U.S. Territory of Guam, the U.S. Commonwealth of the Northern Mariana Islands, the Republic of Palau, and the Federated States of Micronesia (Yap), resulting in a weakening of the proposed listing regulatory action for 5 of the species.

6. Two Crayfish

Proposed Rule. 80 FR 18710: Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Big Sandy Crayfish and the Guyandotte River Crayfish. The final rule (81 FR 20450) determined threatened status for the Big Sandy Crayfish and endangered status for the Guyandotte River Crayfish, resulting in a weakening of the proposed listing regulatory action for the Big Sandy Crayfish.

b. Withdrawn Listings

1. Tiger Beetle

Proposed rule, 77 FR 60207: *Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for Coral Pink Sand Dunes Tiger Beetle and Designation of Critical Habitat*. The final action (78 FR 61082) withdrew the proposed rule to list the Tiger Beetle as threatened.

2. Wolverine

Proposed rule, 78 FR 7863: *Endangered and Threatened Wildlife and Plants; Threatened Status for the Distinct Population Segment of the North American Wolverine Occurring in the Contiguous United States.* The final action (79 FR 47522) withdrew the proposed rule to list the distinct population segment of the North American wolverine (*Gulo gulo luscus*) as a threatened species under the Endangered Species Act (ESA).

3. Two Beardtongues

Proposed rule, 78 FR 47590: *Endangered and Threatened Wildlife and Plants; Threatened Species Status for Graham's Beardtongue (Penstemon grahamii) and White River Beardtongue (Penstemon scariosus var. albifluvis).* The final action (79 FR 46042) withdrew the proposed rule to list Graham's beardtongue (*Penstemon grahamii*) and White River beardtongue (*Penstemon scariosus var. albifluvis*) as threatened species throughout their ranges under the Endangered Species Act (ESA).

4. Greater Sage-Grouse

Proposed rule, 78 FR 64357: *Endangered and Threatened Wildlife and Plants; Threatened Status for the Bi-State Distinct Population Segment of Greater Sage-Grouse With Special Rule*. The final action (80 FR 22828) withdrew the proposed rule to list the

bi-State distinct population segment (DPS) of greater sage-grouse (*Centrocercus urophasianus*) as threatened under the Endangered Species Act (ESA), the proposed special rule under section 4(d) of the Act, and the proposed rule to designate critical

5. Fisher

Proposed rule, 79 FR 60419: *Endangered and Threatened Wildlife and Plants; Threatened Species Status for West Coast Distinct Population Segment of Fisher*. The final action (81 FR 22710) withdrew the proposed rule to list the West Coast Distinct Population Segment (DPS) of fisher (*Pekania pennanti*) as a threatened species under the Endangered Species Act (ESA).

V. Summary

The results of the content analysis of the narrative comments and FWS response provided several key findings. Firstly, 50% of the issues raised in the narrative comments commenters were scientific in nature as opposed to only 23% of the issues raised economic, business, and industry focused, in contrast to previous patterns of commenting reported in the literature. This difference, and the possible reasons behind it, are discussed in the next chapter.

Another key finding was that FWS responded positively, or expressed agreement, with requested changes approximately 38% of the time, with only one listing having a positive response of over 50% (58.2%). Additionally, the FWS was found to be most responsive to requests for clarification or correction to one of the listing documents at 70%. Requested changes respective to additional or new scientific information elicited a higher positive FWS response (54%) than did changes for the underlying science and

methodology (30%). A look to administrative law and the rulemaking literature, provides a reasonable explanation for these findings, as discussed in the next chapter.

One unexpected finding was the lack of specific legal issues or procedural issues within the narrative comments, contrary to what was expected based on the rulemaking literature. Of the 1446 issues raised, only 11 specifically referenced legal terminology when calling into question the FWS's uses of discretion and only 52 raised procedural concerns. The next chapter explores this finding in its discussion.

The next chapter interprets the results through the view of an administrative lens to better understand the agency discretion used by FWS during its listing determinations.

CHAPTER 7: DISCUSSION

I. Introduction

The U.S. Fish and Wildlife Service (FWS) is delegated broad agency discretionary authority when implementing the Endangered Species Act (ESA) to list endangered and threatened species. As discussed previously, very few studies were found examining the Endangered Species Act (ESA) from a federal rulemaking process perspective revealing a void in the current literature. To fill the existing knowledge gap, this study sought to identify and gain insight into factors which influence the use of discretion by the FWS in its listing determinations. This research identified the types of issues raised during public commenting and then analyzed the FWS response to those issues to decipher which types of issues raised by commenters during the notice and comment stage can best influence the FWS's use of agency discretion during its listing process. As detailed previously, the FWS is granted discretionary authority through the Administrative Procedure Act (APA) of 1946 and the Endangered Species Act (ESA) of 1973. The FWS's agency discretion during its listing determinations, however is not unlimited, being subject to judicial review. It is important to remember that the APA only requires the FWS to *consider* the submitted public comments; it does not require the FWS to *act* on anything learned from the public during the notice and comment stage (Kerwin & Furlong, 2011). Findings from this study can be used to inform the commenting campaigns and efforts of conservation groups and resource managers, as

well as individuals, who seek to obtain ESA protections for endangered and threatened species through the listing process.

As a reminder of the methods used in this dissertation, the narrative comments of 11 listing rulemakings completed during the Dan Ashe era were coded as to the type of issues raised by commenters and the FWS response to those issues. The analysis identified 1,446 issues raised in the 1,053 narrative comments found within the 11 rulemakings examined. The issues raised were coded as to type of issue raised: 1) clarification and correction; 2) procedural; 3) underlying science and methodology; 4) new and additional science; 5) critical habitat designation; 6) economic, business, and industry; and 7) legal, existing regulatory mechanisms, and conservation efforts. Of the 1,446 issues raised, 1,236 wanted changes or additions be made to the listing documents. The FWS responses to each of those issues were analyzed to determine FWS responsiveness to the requests as a measurement of commenting influence. The study was informed by administrative law, federal rulemaking scholarship, and the limited number of studies found in the literature examining the ESA listing rulemaking process. Informal discussions with seven ESA implementation and litigation experts helped form the research protocol.

The chapter first interprets and discusses the results of the narrative comment and FWS response analysis, the main focus of the study. The results are compared to the results of previous studies found in the literature and interpreted through an administrative law lens. As discussed earlier, administrative law establishes how federal agencies, such as the FWS, *should* use its discretion during rulemaking. This study explores *how* FWS did use its discretion during its listing determinations for 11

rulemakings. The chapter then briefly discusses two interesting findings from the initial analysis of submitted comments collected from the online rulemaking dockets of four of the listing rulemakings, again looking to previous scholarship. The chapter concludes with a discussion of the implications of the study's findings with respect to future species listings and the federal rulemaking process as a whole and with a look at the limitations of the study.

II. FWS Responsiveness to Issues Raised by Commenters

West (2005) argued that for the notice and comment to meet its rulemaking procedural goal, the federal agency involved in the rulemaking must take the comments received seriously during its decision-making process to reach a final action. According to administrative law scholars, Cuellar (2005) and Lubbers (2012), agencies do take comments seriously and do modify the final rule as a result of commenting. This study found that the FWS responded positively to requested changes or additions to 459 of the 1,236 issues raised for a 37% FWS responsiveness, a finding not unexpected based on the literature. In two other studies examining agency responsiveness, Shapiro (2013) similarly found an agency positive response of 42% to issues raised by commenters in his study, while Nixon et. al (2002) found that the SEC agreed/accepted 56% of the specific rule change requests/proposals submitted by the commenters.

Agencies, however, are reluctant to make substantive changes to a proposed rule after the considerable time and resources invested to develop and draft the proposal. As previously established, rulemaking is a demanding process which requires a lot of time and effort on the part of the agency to develop a proposal for a "thoroughly justified course of action" in its published proposed rule (West, 2004, p. 72). Proposed rules can

take years to be developed requiring considerable time investment and effort by the agency (West, 2009). Previous studies (Golden, 1998; Kamieniecki, 2006a, b; Kerwin & Furlong, 2011; Shapiro, 2008, 2013; West, 2004) found that agencies often make peripheral changes, such as clarifications or corrections, to proposed rules, but are much less likely to make changes to the strength of the regulatory action of the proposed rule. It is, therefore, not surprising that this study found the highest FWS responsiveness (70.6%) for issues requesting clarifications or corrections be made to the listing documents, thus requiring only peripheral changes (see Table 6.5). For example, from the 23 Guam and Mariana Islands Species rulemaking,

> Comment (1): "One peer reviewer commented that many of the Chamorro names of the animals and plants listed in the proposed rule either do not conform to accepted orthography of the language or appear incorrect, and provided corrections for select species" (80 FR 59424, 2015, p. 59472).
>
> FWS Response: "we solicited the guidance from a local language specialist to ensure proper use of Chamorro and Carolinian common names in all our documents regarding the 23 species… We have incorporated all of the recommended changes to the Chamorro and Carolinian common names for plants and animals" (80 FR 59424, 2015, p. 59472)

The FWS exercised its agency discretion to change the names in the final rule document, using what it now considers to be the best available scientific information. The name changes, while important, constitute a peripheral change as the name changes do not change the regulatory listing action of the rulemaking.

Previous rulemaking studies (Golden, 1998; Kamieniecki, 2006a, b; McKay & Yackee, 2007; Yackee, 2006; Yackee & Yackee, 2006; Wagner et al., 2011; West, 2004) suggested that business-related issues would be the dominant category type of issues raised during commenting for the 11 listing rulemakings. Several scholars have reported business groups as the most dominant and/or consistent participants during the notice and

comment stage of federal rulemaking process (Golden, 1998; Furlong, 2007; Kamieniecki, 2006a, b; Libgober, 2020; Wagner et al., 2011; Yackee & Yackee, 2006). Contrary to the findings of previous rulemaking studies, this study found science-related commenting to be more dominant than business-related commenting. The cumulative analysis of the narrative comments of the 11 listing rulemakings found that the combined categories of underlying science and new and additional science, referred to as "science-related issues", accounted for 50% of the issues raised by commenters (See Table 6.6). Economics, business, and industry issues, referred to as "business-related issues", on the other hand, only accounted for 23% of the issues raised in the narrative comments. Of note, while Kamieniecki (2006a) did find business commenting to be dominant for the 5 EPA rulemakings in his study, he did not find business commenting to be dominant for the two natural resource regulations he analyzed as part of his study. For those regulations, Kamieniecki (2006a) found that citizens groups submitted more comments than business groups or other organizations. Interestingly, in one of the few studies looking at the notice and comment stage of listing rulemakings, Ando (1999) reported that public interest groups had the ability to influence the listing process by exerting pressure during the notice and comment stage. Her findings indicated that opposing comments were able to slow down the listing process while supporting comments were able to speed up the process.

There is a resource and time cost associated with commenting (Golden, 1998; West, 2004). Business groups use resources to track the *Federal Register* to allow business organizations to submit comments consistent with the language used by the agency proposing the rule (Golden, 1998; Kerwin & Furlong, 2011; West, 2005, 2009).

Perhaps, the perceived impact of the listings did not meet the threshold from a business and economic standpoint to garner a higher level of business-related participation as seen in previous studies. The differences in commenting participation may also be a reflection of the type of rulemaking analyzed, in this case, the listing of species under the ESA, similar to what Kamieniecki (2006b) saw with the two natural resource regulations he analyzed. Or, it could also be that business-related issues were not raised as often for these 11 rulemakings as for the other types of previously analyzed rulemakings because the ESA's science mandate forbids the consideration of economic impacts for listing determinations.

As just referenced above, the ESA statute requires that listing determinations be made "solely on the best available science and commercial data available" (Endangered Species Act, ESA; 16 U.S.C. §1533, (b)(1)(A)). Economic and/or business impacts must not be considered for listing determinations. More science-related issues were raised than business-related issues within the narrative comments across the 11 rulemakings, as expected based on the type of rulemaking; but when looking at FWS responsiveness, there was only a slight difference found between FWS responsiveness for the science-related issues (37.8%) and the business-related issues (32.4%). From an administrative law perspective, one would expect the gap between the FWS responsiveness to science-related and business-related issues to be greater because of the ESA science mandate. According to administrative law, FWS consideration of economic impacts when making a listing determination would constitute a violation of ESA statute and put the rulemaking at risk of being vacated during a judicial review. Despite ESA statute, economics has been reported as being considered in previous FWS listing rulemakings and is often at the

center of controversies over proposed listing (Lieben,1997; Rinfret, 2011; Wilcove et al., 1993). Commenters did raise economic issues for each of the 11 rulemakings, including by state and local government officials, but the FWS did make clear in its corresponding responses that its discretionary authority did not extend to the consideration of economics for listing determinations. For example, from the Greater Sage-Grouse rulemaking,

> Comment (15): "Several commenters expressed concern that economic development will be negatively impacted by listing and suggested that it is necessary for the Service to conduct an analysis of the impacts that listing a species may have on local economies prior to issuance of a final rule." (80 FR 22828, 2015, p. 22858)
>
> FWS Response: "Under the Act, the Secretary shall make determinations whether any species is an endangered species or a threatened species solely on the basis of the best scientific and commercial data available. Thus, the Service is not allowed to conduct an analysis regarding the economic impact of listing endangered or threatened species." (80 FR 22828, 2015, p. 22858)

This limitation, or check, to the FWS's agency discretion resulted from the 1982 amendments to the ESA.

The FWS chooses which science constitutes the "best available science" to be used when determining whether or not the proposed listing is warranted by exercising its discretionary authority. One of the most interesting and potentially impactful findings of the study was the difference found in FWS responsiveness to the two themes of science-related issues analyzed in this study. The analysis found the FWS responsiveness to be much greater for the new and additional science issues (54.3%) than for the underlying science and methodology issues (29.5%) (see Table 6.5). The difference is definitely noteworthy, but is not all that surprising, or unexpected, when viewed through an administrative law lens. As already mentioned above, agencies invest a lot of time and resources in drafting a proposed rule which can withstand judicial scrutiny. It is

reasonable that the FWS would be less responsive to issues raised about the underlying science used for the proposal, or the methodological process used when evaluating that science. For example, from the Northern Long-eared Bat rulemaking,

> Comment (25): "One commenter stated that more State-specific data are needed considering the ambiguity and divergence across the range of the northern long-eared bat" (80 FR 1794, 2015, p. 18010)
>
> FWS Response: "The Act requires us to make a determination using the best available scientific and commercial data after conducting a review of the status of the species." (80 FR 1794, 2015, p. 18010)

In this example, the FWS does not respond positively to the comment, instead defending its discretionary choice of underlying scientific data used to propose listing for the Northern Long-eared bat as endangered. For clarification, the ESA does not require the FWS (or the NMFS) to do its own research to address information gaps or obtain missing scientific data (Wymyslo, 2009). While the FWS has the agency discretion to determine which types, quantity, and quality of scientific information constitutes BAS for a particular listing determination, the FWS has little discretion to defer decision-making for rulemakings when important scientific information is lacking or missing (Woods & Morey, 2008).

As clearly stated by the FWS in the response example above, and previously in this dissertation, the FWS is required to base listings on the best available science. It stands to reason, therefore, that the FWS would be more likely to exercise its agency discretion to use new or additional science provided through the public commenting process in its listing determinations; as shown with this study. Here is an example from the Two Crayfish rulemaking,

> Comment (9): "…the VDGIF also provided information on an occurrence location within the Russell Fork watershed that we were unaware of and noted

> two locations in the upper Levisa Fork watershed from which the species appears to have been extirpated." (81 FR 20450, 2016, p. 20452)[29]
> FWS Response: "We appreciate the VDGIF's additional data on Big Sandy crayfish occurrence locations in Virgina, and we have incorporated this information into this final rule." (81 FR 20450, 2016, p. 20542)

As illustrated in this example, the FWS used its discretionary authority to choose what constitutes the best available science to use in choosing to incorporate the new species occurrence data into the final rule. The decision of which species data are evaluated, and whether or not that data are sufficient for a listing determination, ultimately falls within the FWS's agency's delegated broad discretion (Doremus, 2004; Murphy & Weiland, 2016; Steen & Leverette, 2013; Weijerman et al., 2014). New or additional scientific information or data is frequently cited as the reason for a species being down listed from endangered to threatened in the final rule or the proposed listing for a species being withdrawn in the final action. Additionally, Yackee (2006) advanced that agencies respond to interest group influence as a result of the groups offering new information and outside expertise, or as a means of heading off future potential court challenges.

This finding of the FWS being considerably more responsiveness to new and additional science over the underlying science and methodology has significant implications for conservation groups and other interest groups seeking to influence a listing process through the submission of comments. These implications are explored later in the chapter. This novel finding provides previously unknown insight into the listing determination decision-making process of the FWS, contributing to both the ESA and the federal rulemaking scholarship.

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[29] VDGIF (Virginia Department of Game and Inland Fisheries)

Litigation through the citizen's suit provision of the ESA (Glitzenstein, 2010; Greenwald, 2006; Langpap et al., 2018; Puckett et al., 2016; Salzman, 2014) and legal settlements forcing agency action have played key roles in species listings (Greenwald et al., 2006; Puckett et al., 2016). One strategy employed by interest groups in environmental rulemakings is the submission of legally directed comments, with the intended purpose of influencing the rulemaking but also to establish standing to later sue if the rulemaking does not go their way (Rinfret, 2011; Wagner et al., 2011). Just the threat of judicial review or litigation by those with opposing views can act as a powerful restraint or deterrent to agency rulemaking behavior (Kerwin & Furlong, 2011). Consequently, the most unexpected finding of this study was therefore the near absence of actual legal issues raised by commenters. Only 12% of the issues raised in the narrative comments fell into the category of legal, existing regulatory mechanism, and conservation efforts, and even more surprising, only 11 of the 1446 raised issues specifically referenced legal terminology to call into question the legality of the FWS's use of discretion during its listing determination.

For example, from the Gunnison Sage-Grouse rulemaking (italic emphasis by the author),

> Commenter (36): "The Utah Office of the Governor described Gunnison sagegrouse population trends in Utah and stated that reliance on current population figures would be an *arbitrary and capricious* application of facts because adequate time has not been allowed to determine if numbers will return to stable levels following the severe winter in 2010." (79 FR 69192, 2014, p. 69214)
>
> FWS Response: "We recognize that there is annual variability in population numbers for the Gunnison sage-grouse. Consequently, we place more emphasis on longer-term population trends over a number of years than on population estimates from any given year. Our analysis considers Gunnison sagegrouse population trends from 1996 (when lek count protocols were standardized) through 2013." (79 FR 69192, 2014, p. 69214)

Acting in an "arbitrary and capricious" manner is a violation of the APA, so in the example, the Utah Office of the Governor appears to interject that legal terminology in an attempt to establish standing for future litigation if the listing is finalized. The misuse, overreach, or abuse of FWS's discretionary authority is often cited as the grounds for litigation over FWS listing rulemakings (Evans et al., 2016; Ruhl, 2010; Salzman & Thompson, 2014; Scott et al., 2006). The FWS in its response appears to dispute the arbitrary and contentious use of its discretionary authority.

The expectation of finding a higher percentage of issues raised for the legal, existing regulatory mechanisms, and conservation efforts theme also stemmed from the knowing the role Conservation Agreements (CAs) can play in listing determinations and it becoming clear from the coding that the existence of a CA did influence the FWS's use of discretion when making listing determinations. A CA is a formal, voluntary agreement between the FWS and one or more parties to address the conservation needs of one or more species (U.S. Fish & Wildlife Service, 2022c). During one of the early informal discussions with one of the 7 key informants, when asked why proposed listing rules were sometimes withdrawn, the expert stated that oftentimes when a listing proposal is withdrawn, it is the result of a conservation agreement (CA) being struck. For example, from the two Beardtongues listing,

> Comment (98): "One commenter supports the conclusions of the proposed rules that energy development including oil shale development and traditional oil and gas drilling poses a threat to the species." (79 FR 46042, 2014, p. 46064).
>
> FWS Response: "We agree that energy development is a threat to the species; however, we have determined that the 2014 CA adequately addresses these threats by establishing conservation areas throughout the range of the species" (79 FR 46042, 2014, p. 46064).

The FWS exercising its agency discretion in its determination that based on the CA put in place, the threat level to the species is diminished enough that the listing is no longer warranted.

As a caveat, some of the issues raised with respect to procedural concerns could also have been submitted potentially for use in future legal action, as illustrated in the example below. Although as with this example, in most instances the FWS effectively addressed the issue by stating its compliance with the appropriate statute or regulation. It is important to note, that the court can also overrule an agency rule by holding that improper procedures were used by the agency when promulgating the rule (Anderson, 2011). Just over 8% of the issues raised were procedural in nature.

An example, from the Fisher rulemaking,

> Comment (118): "Many commenters expressed concern that the Service has delayed listing the proposed West Coast DPS of fisher." (81 FR 22710, 2016, p. 22759)
>
> FWS Response: "We have not delayed listing the fisher. We have followed statutory, regulatory, and policy requirements that govern adding species to the List of Endangered and Threatened Wildlife." (81 FR 22710, 2016, p. 22759)

Critical habitat designation for listed species is often contentious and controversial as a result of the potential economic ramifications, as well as other burdens, which can impact the affected landowners and business owners. Also unexpected, therefore, was the low percentage of issues raised related to critical habitat designation, at just over 2%. It was reasonable to expect, based on the often contentious and controversial nature of critical habitat designation, more critical habitat designation issues to be raised than actually found in the study. However, this unexpected finding can be

explained based on the cumulative analysis approach used and the dataset, the literature, and the developed code.

Firstly, as with previous studies, the analysis was done cumulatively, across rulemakings so the result could simply be a reflection of the proposed regulatory actions of the rulemakings. With only two of the listing proposals also proposing concurrent critical habitat designation, it is not unreasonable to find a relatively low percentage of critical habitat designation issues when analyzed across all 11 rulemakings. Secondly, as discussed previously, there is a resource and time cost to commenting. As such, commenters may have found it more prudent when submitting comments for the 9 listing only proposals to focus on the listing action itself, rather than any future designation of critical habitat, if the species was listed. And thirdly, it is important to keep in mind that the code used in the analysis was specific to critical habitat identification and designation issues raised. Issues raised with respect to species habitat were coded either as existing science or new and additional science, depending on the type of species habitat issue raised (See Appendix C).

The federal rulemaking process is political by its very nature (Kerwin & Furlong, 2011; Warren, 2011). As concisely stated by Kerwin and Furlong (2011), "Every major player in the American political system – Congress, the president, the courts, interest groups, and the bureaucracy – is deeply involved in rulemaking and in each of its dimensions" (p. 277). Anderson (2011) stated, "An agency dwells and acts on a political milieu that affects how it exercises power and carries out its programs" (p. 225). West (2004) opined that agency responsiveness is often embedded in political processes that eclipse the consideration of public comments. As politics were not able to be definitively

coded for in this analysis (see Limitations below), an attempt was made to control for political influence through the choice of the timeframe used for this study, as previously done by Golden (1998) and Shapiro (2008). The rulemakings selected for analysis were proposed under one FWS Director, Dan Ashe, whose tenure spanned the two-term Obama Administration. Attempts to politically influence a rulemaking were found still found, not unexpectedly. An example of such commenting is offered below from the Tiger Beetle rulemaking.

> Comment (18): "Utah congressional representatives requested that we: (1) Extend the original comment period for the proposed rule by 90 days; (2) extend the date by which the public can request a hearing on the proposal until 60 days into the 90-day extension; and (3) make all the resources cited in the proposed rule readily available on the Service Web site." (78 FR 61082, 2013, p.61091)
>
> FWS Response: The Service is committed to working closely with the public, governmental agencies, and nongovernmental groups to make certain that all comments, concerns, and relevant information are considered in our rulemaking process. However, court-mandated deadlines and statutory limitations of the Act limit the temporal flexibility we have to administer this rulemaking process. For example, the Service's multi-district litigation settlement (In re Endangered Species Act Section 4 Deadline Litigation, No. 10–377 (EGS), MDL Docket No. 2165 (D.D.C May 10, 2011)) mandates completion of the Coral Pink Sand Dunes tiger beetle rulemaking within the standard timeline set forth in the Act. In addition, the time period by which the public can request a public hearing (45 days following publication of a proposal) is specified in the Act and cannot be extended. For these reasons, we were not able to provide a 90-day extension to the original proposed rule comment period. However, on May 6, 2013, we published in the Federal Register a notice of availability of the draft economic analysis for the proposed rule as well as other documents pertinent to the listing. We also reopened the comment period on the proposed rule for 30 days, and thus we accepted additional comments on the CPSD tiger beetle rulemaking. The two comment periods included: (1) October 2, 2012, to December 3, 2013; and (2) May 6, 2013, to June 5, 2013. After the publication of the proposed rule in early October 2012, the Service received an informal request from Kane County Commissioners for a public hearing. In response to this request, we held an informational meeting and a public hearing on May 22, 2013, in Kanab, Utah." (78 FR 61082, 2013, p.61091)

In a Yale Law Journal article, Watts (2009) reported that individual members of Congress will sometimes try to influence a rulemaking through the submission of comments. The coding of the narrative comments for the Tiger Beetle Rulemaking did find that the Utah congressional representatives had indeed submitted commenting in an attempt to influence the listing rulemaking process. Strikingly, the requests made in the comment showed either an ignorance of ESA statute on the part of the Utah congressional representatives, or more likely, a disregard of the statute in their apparent attempt to prolong or complicate the listing process. The FWS did follow ESA statutory deadlines according to its response. As stressed by Warren (2011), the role that politics can play in agency decision-making should never be ignored or underestimated. The next section discusses some of the insights gained from the initial review of the submitted comments for some of the some of the rulemakings.

III. Submitted Comment Insights

Initially, this study began reviewing and analyzing submitted comments retrieved from the online rulemaking dockets applying the framework developed by previous scholars (Golden, 1998; Kamieniecki, 2006a, b; McKay & Yackee, 2007; Yackee, 2006; Yackee & Yackee, 2006; West, 2004). Due to the volume of comments and availability of documents, the study methodology was changed to instead analyze the publicly available narrative comments and their corresponding FWS responses following the approach of another group of scholars (Maga, et. al.; 1986; Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011). The initial analysis of the submitted comments did, however, offer some interesting insight into strategies used by commenters in an attempt to influence the listing process, specifically with respect to coordinated commenting efforts

and the submission of alternative science. The next section discusses the two strategies identified.

In reviewing the submitted comments for the Six Butterflies listing proposal, an interesting trend appeared which illustrated the use of coalition lobbying as a strategy employed by several of the commenters. The Six Butterflies proposed rule listed the Mount Charleston Blue Butterfly, *Plebejus shasta charlestonensis*, as endangered and five other blue butterflies as threatened due to their similarity of appearance to the Mount Charleston Blue Butterfly (77 FR 59518). A study conducted by Nelson and Yackee (2012), looking at the influence of lobbying coalitions during the preproposal stage of rulemaking, found that coalition lobbying does influence regulatory policy output. The scholars defined coalition lobbying as, "any coordinated effort by interests to lobby government with the aim of advancing a shared advocacy agenda" (p. 339). In the case of the butterfly listing, the lepidopterists, an interest group, acted in a coordinated effort to advocate for their shared agenda of collection of the 5 blue butterflies resembling the Mount Charleston Blue Butterfly. Lepidopterists are people who study or collect butterflies. The majority of the commenters self-identified as members of International, National, Regional, and State Lepidoptera groups and did not want the 5 "look-alike" blue butterflies listed. A review of the submitted comments showed that the lepidopterists had referenced the comments of other commenting lepidopterists in their submitted comments in what appears to be a coordinated effort to weaken the regulatory action of the proposed listing. As part of their coordinated strategy, the lepidopterists sought to influence the FWS's discretionary choice of the best available science for its listing determination by submitting new identification information and additional range

information for the five “look-a-like” butterflies proposed. Similar to what Nelson and Yackee (2012) found during the preproposal stage of rulemaking, the lepidopterists were also able to exert influence during the notice and comment stage of the butterfly rulemaking through the use of a coalition lobbying type commenting strategy.

In the final rule, the FWS listed the Mount Charleston Blue Butterfly, *Plebejus shasta charlestonensis*, as endangered but did not list the other 5 blue butterflies as threatened, based in part, on the new and additional submitted information submitted by the lepidopterists in their coordinated submitted comment effort.

As argued by MacGarity (1984), the science is not always adequate enough for consensus among the experts during scientific rulemaking. The FWS uses its agency discretion to chooses the science underlying its listing determinations, but per administrative law, must be able to robustly defend its discretionary choices when facing judicial review, as previously discussed. The review of the submitted comments for the Two Beardtongues proposed listing revealed the use of a strategy previously identified by one of the key informants and also reported in the literature, that of offering alternative science to the science used in support of the rulemaking. During an informal discussion with an attorney who litigates against ESA listings and critical habitat designations, when asked how one litigates against the science, the attorney stated matter-of-factly that he just introduced his own science to contradict the science used for the listing. This strategy or tactic of offering a different view or interpretation of the science to bolster one’s side or position is not new (Alm, 2010; Lovbrand & Oberg, 2005; Sarewitz, 2004). Sarewitz (2004) referred to the phenomenon of having a large body of scientific knowledge which

can be legitimately interpreted and used differently to support competing views as an "excess of objectivity" (p. 389).

The Two Beardtongues rulemaking proposed the listing of the Graham's Beardtongue, *Penstemon graham*, and the White River Beardtongue, *Penstemon scariosus var. albifluvis*, as threatened (78 FR 47590). The review of the submitted comments for the Beardtongue listing found that one of the commenters who represented an Energy company in opposition to the listing had submitted an 85-page report providing its own scientific information in contradiction to the underlying science used for the listing determination. The proposal to list the two Beardtongues was one of the 5 selected proposed listings which were ultimately withdrawn by the FWS in a published final action. With respect to the Two Beardtongues proposal, the FWS concluded that based, in part, on new information, the identified threats to the two species stated in the proposed rule were no longer as significant as previously determined.

IV. Agency Discretion

Congress, through its agency-authorizing statutes, grants federal agencies discretionary authority for their rulemaking, enabling federal agencies to fill in the gaps of broad Congressional legislation (Lemos, 2008). As such, the exercise of agency discretion by public administrators is an important consideration in the rulemaking process (Kerwin & Furlong, 2011; Peters, 2013; Warren, 2011). Friedrich argued that administrators have the responsibility of being accountable to the professional controls of objective scientific standards as well as being responsive to existing public preferences (Friedrich, 1940; Mosher, 1981; Stewart, 1985). According to Pressman and Wildavsky (1984), administrative discretion is both inevitable and necessary when implementing

policy in an uncertain world although voiced concerns over the misuse or abuse of such authority.

The FWS relies on its agency discretionary authority when choosing which scientific data and information is the best available science to be used for listing determinations, when seeking outside expertise and soliciting peer reviewers, and when decided which publicly submitted comments to act on during the final decision-making process on whether or not to list a species. As Yaffee pointed out in 1982, and which is still seems the case today, agencies charged with implementing the ESA are often inadequately staffed, don't have the necessary resources, and face considerable technical and scientific uncertainty, and so have to rely on agency discretion when engaged in rulemaking to list species. The FWS's use of agency discretion plays a vital role in its implementation of the ESA to list species, as evidenced by the results from this study, and as supported by the literature (Lowell & Kelly, 2016; Puckett et al., 2016; Wymyslo, 2009; Yaffee, 1982). The next section discusses the implications of the findings of this study.

V. Implications

First and foremost, this study contributes to the federal rulemaking scholarship by looking specifically at the ESA rulemaking process and identifying the types of issues raised by commenters which can best influence the FWS's use of agency discretion during its listing determinations. An exhaustive search of the both the federal rulemaking literature and the Endangered Species Act (ESA) literature found few studies examining the species listing rulemaking process. This study helps to narrow this identified knowledge gap by providing new insight into the federal rulemaking process to list

species under the ESA. The study also offers a different perspective on the notice and comment stage of federal rulemaking than found in the existing literature by viewing the stage through an administrative lens. The study also contributes to the existing Public Administration literature by exploring how FWS uses its administrative discretion during listing determinations, thus adding to the agency discretion scholarship. This study also increases the breadth of the current ESA scholarship by looking specifically at the ESA rulemaking process rather than existing scholarly focus on the effectiveness of the ESA and the many controversies surrounding the ESA. And finally, this study will contribute to the ongoing efforts to protect endangered species by better informing the public on how they can participate and influence FWS decision-making during the notice and comment stage of rulemakings to list endangered and threatened species.

Different from many of the previous studies found in the literature, this study focused on the rulemakings of a single agency, rather than rulemakings across a set of different agencies. While only looking at one agency does reduce the generalizability of the study, it does allow for a more definitive examination of agency discretion without the inherent differences found across agencies when analyzing rulemakings across multiple agencies. Federal agencies are delegated different levels of discretionary authority, and have different agency leadership, budgets, structures, and cultures, which can each impact an agency's use of direction. Even agencies working within the same regulatory space, i.e., implementing the same regulatory statute, can utilize different approaches to achieve the same goal based on agency discretion. The different approach in the use of agency discretion by the FWS and NMFS is one of the reasons why the dataset for this study includes only the FWS listings rulemaking, and not of both the FWS

and NMFS (Lowell, 2016). While there is value from such cross-agency studies, there is a need for more studies looking at individual agencies as well to gain a deeper understanding of agency discretion.

Two main approaches to analyzing commenting influence were found in the literature: 1) analyzing the submitted comments; and 2) analyzing the narrative comments with corresponding FWS responses. This study had the unique perspective of utilizing both approaches which highlights the fact that both approaches over their own unique insight into the notice and comment stage of the rulemakings as illustrated by the Six Butterflies rulemaking. Analyzing the submitted comments for the Six Butterflies rulemaking revealed that coalition commenting had been used as a tactic by the various groups of Lepidopterists; however, reviewing the submitted commented provided the opportunity for the collection not generally available from the narrative comments, such as the commenter affiliation and geographic location, and allows for quantifying the number of actual commenters. Analyzing the narrative comments and the FWS responses also provided insight into how the FWS uses its discretion during the notice and comment stage which is not available by analyzing the submitted comments alone. Based on the perspective from this study, ideally both submitted comments and the narrative comments with corresponding FWS response should be analyzed to get glean the most information from the notice and comment stage of a rulemaking. Although this combined approach is often not feasible due to time and resource constraints, and issues with data availability.

Probably the most important implication of this study outside of the scholarly contribution the findings make, is the ability to inform individual commenters, and the special interest groups who conduct mass commenting campaigns, how better to have an

impact on the listing process through commenting participation. As even stated in some of the proposed rules, commenting which only states support or opposition to a rulemaking and do not offer any additional information, will not be acted upon for the listing determination, and the same goes for form letters. Based on the findings of this study, the best way to influence the FWS listing determination for a species is to submit new or additional scientific information or data for the species which is cited. This approach to commenting could also provide scientific information and data to the agency which otherwise might have not been available, or just missed. The next section looks at the limitations of the study.

VI. Limitations

One of the first limitations encountered for this study was the lack of availability of some of the data. Initially, the methodological approach taken required the collection of the submitted comments for the rulemakings from their respective online dockets. Only some of the comments were found within the docket. While the rest of the comments could have been viewed by going to the responsible FWS field or regional office, this was not feasible. The submitted comments also could have been obtained through FOIA requests, but again, this was not feasible. Plus, the sheer number of submitted comments for the rulemakings made was found to be unmanageable. Alternatively, the choice was made to analyze the narrative comments and corresponding responses. This data was publicly within the published final rule or action and was available through the online Federal Register.

The use of narrative comments as opposed to the submitted comments; however, presented its own set of limitations. Identification of the commenter affiliation or

geographical location is also not possible for most commenters when analyzing narrative comments. Some narrative comments do identify other agencies or levels of government as commenting. Future research should include a submitted comment analysis. This limitation precluded a direct analysis of political commenting influence, but there was still insight to be gained from the coding of the narrative comments which did identify the issues raised as from an agency or government office.

The quantitative results of the study which were obtained only represented the number of issues raised not the actual number of commenters. As a result, quantification of the number of actual comments of each type commenting was not ascertainable, nor was a quantitative determination of the level of support or opposition to the listings possible. In general, commenters submit comments to push for or against the proposed rulemaking. While only 197 out of the 1446 raised issues expressed direct support or opposition to the proposed listings, it is reasonable to assume that the majority, if not all of the commenters, either supported or opposed the listing which was not able to be captured through this analysis.

Analyzing the narrative comment and FWS responses analysis, does have a key advantage over submitted comment analysis, as it provides unique insight into the FWS's use of discretion during its listing determination by being able to read the FWS response to the issues raised by commenters. Reviewing and analyzing the submitted comments does not allow for that one-to-one connection. The ability to analyze the FWS responses to each of the issues raised by commenters provides a window into the decision-making process used by the FWS to make listing determinations. In some instances, the FWS responses indicated directly how the agency viewed its discretionary authority or even

stated the limits of that authority. Additionally, by analyzing the narrative comments rather than the submitted comments, the issue of the sheer volume of comments as a result of mass commenting campaign is not an issue.

Previous studies (Nixon et al., 2002; Shapiro, 2013; Wagner et al., 2011) used the agencies' responses to commenter requests to strengthen or weaken the regulatory action of the rulemakings as the studies' measurement of commenting influence. For this study, contrary to the previous studies, few of the issues raised by commenters could be coded as definitively requesting changes that would strengthen or weaken the proposed listing action, which posed a limitation. Instead, the FWS responsivity to commenters' desired changes or additions to the listing documents was used as a measurement of public commenting influence.

Differences in leadership, budgets, agency culture, scientific data collection, as well as in the use of agency discretion by the FWS and NMFS precluded the combined analysis of both the FWS and NMFS rulemakings. As a result, one has to be cautious at any attempts to any generalize the findings from the FWS study to NMFS, or ESA agency implementation as a whole. Similarly, as the study was done under one FWS director, one needs to cognizant of that when discussing the use of FWS agency discretion during the tenure of another FWS Director. Limitations for this study also include the lack of generalizability of the results and findings due to the study involving non-random sampling, not random sampling. Additionally, as illustrated by this study when comparing its findings with other study findings, the type and level of commenting can vary widely across agencies. How and to what extent commenting influences an agency's use of discretion while rulemaking is based on several factors, including its

enabling statute. Therefore, caution is required when attempting to generalize the findings of this study to other agencies.

VII. Conclusion

The goal of this study was to gain a better understanding of how public commenting can influence the FWS's use of its discretionary authority during its listening determination. This dissertation sought answers to the research question, *which types of issues raised by commenters during the notice and comment stage can best influence the FWS's use of agency discretion during listing determinations?* This study offered unique insight into the FWS's use of its discretionary authority when deciding whether or not to finalize a proposed listing rule, as originally proposed, revise it following the notice and comment stage, or withdraw it.

The cumulative findings of this study indicate that scientific-based commenting, in particular, comments providing new or additional science, have the most potential to influence the FWS use of discretion during FWS listing rulemakings. Despite the ESA mandating that listing determinations be based solely on the best available science and commercial data, not economic considerations, commenters still raise issues related to economics in their submitted comments. Contrary to what has been reported in the literature, only rarely was a specific legal issue raised in the narrative comments. Critical habitat designation related issues were also rarely raised by commenters, except for the two rulemakings which proposed current habitat designation. Similar to previous studies, the FWS was found to be more likely to make smaller, more peripheral changes to its listing rulemakings, rather than substantive changes. This study highlighted the need for more studies analyzing the rulemakings and rulemaking process of individual federal

agencies, in addition to the more prevalent multi-agency analysis approach found in the existing literature.

The two most important implications of this study are the contributions it makes to the federal rulemaking, public administration, and ESA scholarship and its ability to better inform conservationists, resource managers, as well as anyone interested in the conservation of endangered and threatened species. While limited by its lack of generalizability to other agencies, the study offers a unique understanding of how the FWS uses its discretionary authority for its listing determinations.

The last chapter provides a final look at this study and then offers future research avenues.

CHAPTER 8: CONCLUSIONS AND FUTURE RESEARCH

It can take years for a species to be proposed for listing under the Endangered Species Act (ESA). Once proposed, the public is given the opportunity to submit comments on the proposed listing during the notice and comment stage of the federal listing rulemaking process. While several studies can be found in the literature examining the influence of commenting during the notice and comment stage, there were only a few studies examining the ESA listing process from a rulemaking perspective, and none specifically looking at which types of comments could best influence the listing decision-making of the U.S. Fish and Wildlife Service (FWS). The goal of this study was to fill that knowledge gap by gaining a better understanding of the FWS's use of agency discretion during its listing determinations and identifying ways the FWS's discretionary authority can be influenced during the listing rulemaking process. This dissertation contributes to the federal rulemaking literature, the public administration literature, and the ESA literature by answering the research question, *which types of issues raised by commenters during the notice and comment stage can best influence the FWS's use of agency discretion during listing determinations?*

To answer this question, 1,053 narrative comments and their corresponding FWS responses of 11 listing rulemakings during the tenure of FWS Director Dan Ashe of the Obama Administration were analyzed. The 1,446 issues raised within the narrative comments were coded as to type of issue: 1) 1) clarification and correction; 2) procedural; 3) underlying science; 4) new and additional science; 5) critical habitat

designation; 6) economic, business, and industry; and 7) legal, existing regulatory mechanisms, and conservation efforts. The FWS responses for the 1,236 raised issues which wanted changes or additions made to the proposed listing documents were coded for FWS responsiveness as a measurement of commenting influence. Percentages of the types of issues raised and FWS responsiveness were calculated for individual rulemakings and cumulatively across the 11 listing rulemakings and were presented in tables. The results were then viewed through an administrative lens law when exploring the FWS's use of agency direction during its listing determinations.

The study produced some expected results as well as some surprising results. As expected, the FWS was found to be most responsive to commenter requests for clarifications and corrections constituting only peripheral changes to the proposed listing documents. The predominance of science-related issues (50%) over business-related issues (23%) on the surface was unexpected based on previous commenting studies. However, when considered from an administrative law perspective, the results were not surprising when taking into account the ESA science mandate. One of the most surprising results, and the one with potentially the greatest implication for public commenting for species listings, is the finding that the FWS was more responsive to comments raising awareness of new or additional science than those raising issues over the underlying science and methodology. It does point to the importance of agencies involved in scientific rulemaking having the discretionary authority and flexibility to be able to base their decision-making on new or additional science which comes to light during the rulemaking process. The lack of legal issues raised by commenters was also quite

surprising due to the often-used strategy of litigating unfavorable environmental rulemakings.

This dissertation contributed to the federal rulemaking scholarship through its examination of the FWS rulemaking process to list species under the ESA. By answering the research question, *which types of issues raised by commenters during the notice and comment stage can best influence the FWS's use of agency discretion during listing determinations?,* unique insight was gained into the FWS's use of discretion when considering whether or not to list a species. The analyzing of the rulemakings of a single agency, rather the combined rulemakings of more than one federal agency provides a deeper understanding of agency discretion. The use of agency discretion differs by agency as a result in differences in the delegation of discretionary authority, agency leadership, budget, structure, and even agency culture. As such, investigating the use of agency discretion across agencies can get a bit muddled, especially with sometimes diverse rulemakings across agencies. This research also contributes to the Public Administration scholarship through its examination of the use of administrative discretion by the bureaucrats working within the FWS. The study adds to the administrative law scholarship as a case study of a federal agency's adherence to rulemaking procedure set forth by the Administrative Procedure Act and its enabling statute.

It is the hope of this researcher that the findings from this study can be used to inform conservation efforts to protect and recover species and to assist natural resources managers in their wildlife management efforts by providing a clearer understanding of process to achieve listing protections under the Endangered Species Act. Conservation groups expend a lot of time, and sometimes money, to organize mass commenting

support for rulemakings. But as noted earlier, the FWS doesn't make changes as a result of large volumes of duplicate or nearly duplicate submitted comments. The FWS also states it does not take into consideration submitted comments only voicing support or opposition to a listing. The most important practical application of the findings of this study is to better inform the public as to how best to influence the FWS's use of discretion for its listing determination. The most important take-away from the study is that the best chance of influencing a listing is through the submission of new or additional scientific data or information. Another important take-away from the study is that the development of a conservation agreement (CA), which sufficiently diminishes the threats posed to the species, can preclude the listing.

As with any research endeavor, it is important to be aware of the limitations of the study. In this case, due to the purposive sampling and only looking at one federal agency, caution must be taken when generalizing results to other federal agencies. While data availability issues led to a change in the methodological approach from analyzing submitted comments to narrative comments, doing so did provide a unique insight to the decision-making and use of agency discretion by the FWS which would not have been as evident analyzing just the submitted comments. Analyzing the submitted comments does allow, in most instances, for identification of commenter affiliation and geographic location. Plus, quantification of the number of actual comments of each type commenting as well as a quantitative determination of the level of support or opposition to the listings possible is ascertainable when analyzing the submitted comments. One future research direction would be to go back and analyze the submitted comments of the 11 rulemakings, using a random sample for rulemakings with a high volume of comments,

to quantify patriation and look at the affiliation and geographical location of the commenters, as done previously in studies. Submitted commenting analysis would also allow for a more in-depth look at any coordinated commenting, such as identified when analyzing the Six Butterflies listing submitted comments.

Other future research directions include further analysis of the rulemakings in this study which were vacated and remanded for further FWS consideration as a result of judicial review. Four of the 5 proposed listing which were withdrawn were subsequently ligated, questioning the FWS's use of discretion during its listing determinations. Ultimately, 3 proposed listing were again withdrawn, but one proposed listing was promulgated to final rule listing a smaller Fisher DPS as endangered. Future research includes analysis of the reopened commenting for the 4 aforementioned rulemakings which had been withdrawn during the timeframe of this study. Additionally, a review of the court findings for the 4 litigated rulemakings would provide insight to why the courts ruled the FWS abused or misused its discretionary authority when originally withdrawing the proposed listings. It is important to remember that judicial review looks at the entirety of the rulemaking process, not just the notice and comment stage. Business and industry and political influence is often at play during the pre-proposal stage, as reported in the federal rulemaking literature.

Future research also includes analyzing the listing rulemakings by the NMFS during the timeline of this study to investigate what issues were raised during the commenting for the NMFS listing proposals. While differences clearly exist between the two agencies, as discussed earlier, it would be interesting to see which type of issues

raised best influence the NMFS's use of agency discretion during its listing determinations.

And finally, future research includes repeating this study for FWS listing rulemakings undertaken during a Republican Administration to explore differences in the use of agency discretion based on the political party in control.

In closing, the findings from this study can assist conservation efforts and natural resources managers by providing a clearer understanding of process to achieve listing protections under the Endangered Species Act.

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81 *Federal Register* 22709, April 18, 2016

APPENDIX A

U.S. Fish and Wildlife Service Species Assessment Process

The steps of the species assessment process followed by FWS when determining the status of a species for listing are diagramed in Figure C.1. The first step (step 1) of a status determination is to determine if the population in question is a listable entity, i.e., is the population recognized as a species, subspecies, or distinct population (DPS), as defined by DPS policy (Bruskotter, 2010). If the population is not so recognized, then it is not eligible to be listed. If the population is recognized as a species, subspecies, or DPS, the listing status review proceeds. The next step (step 2) is to determine what the population's range is, and what constitutes a significant portion of that range. The last step (step 3) is to analyze the population's range to determine if the species is threatened with or in danger of extinction over a significant portion of its range or throughout its range, as a result of one or more of the five listing factors defined in the ESA statutes. Only one of listing factor needs to be identified as threatening or endangering a species for the species to be eligible for listing. The five listing criteria of the ESA are: 1) the present or threatened destruction, modification, or curtailment of its habitat or range; 2) overutilization for commercial, recreational, scientific, or educational purposes; 3) disease or predation; 4) the inadequacy of existing regulatory mechanisms; or 5) other natural or anthropogenic factors affecting its continued existence. If the population is found to be threatened with or in danger of extinction over all or a significant portion of its range by at any of the listing factors, the status determination will be to list the species. If the assessment by FWS determines the species should be listed, FWS publishes a proposed rule to list the species in the *Federal Register*.

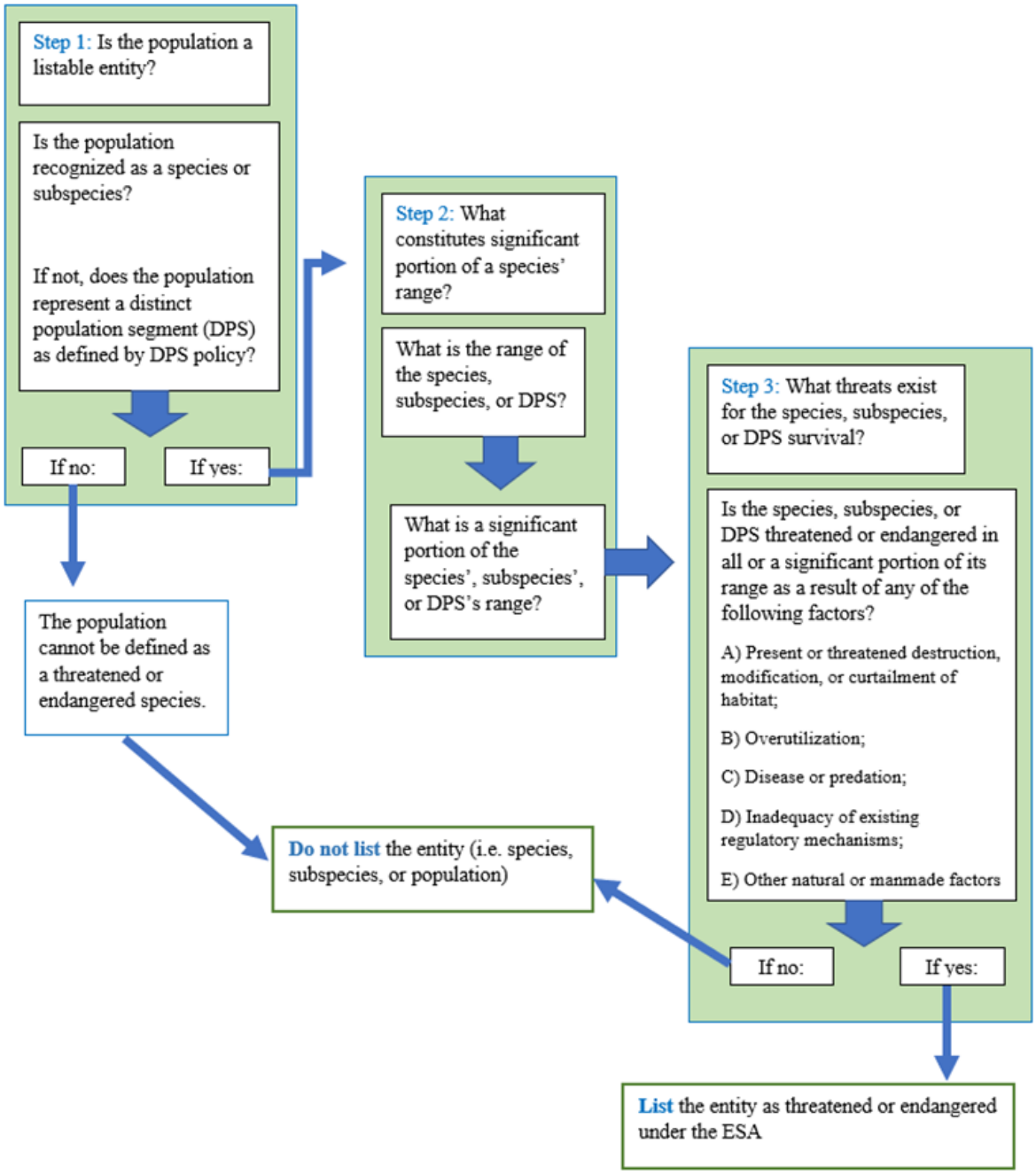

Figure C.1 Listing Status Determination[30]

[30] Source: Adapted from Bruskotter et al. (Bruskotter et al., 2010).

APPENDIX B

Degree of Change Analysis Codebook

Degree of Change Codebook

None	No changes were made to the listing action of the listing rulemaking; the listing action stated in the published proposed rule was the same as the listing action stated in the published final rule, i.e., the listing action of the FWS rulemaking was not strengthened or weakened as a result of the notice and comment stage of the rulemaking process, and no changes were detailed in the "Summary of Changes from Proposed Rule" section in the published final rule document Exemplars: Proposed Rule: "We, the U.S. Fish and Wildlife Service, propose to list the Zuni bluehead sucker as an endangered species under the Endangered Species Act" Final Rule: "We, the U.S. Fish and Wildlife Service (Service), determine endangered species status under the Endangered Species Act of 1973 (Act), as amended, for the Zuni bluehead sucker (*Catostomus discobolus yarrowi*), a fish species from Arizona and New Mexico." and, Proposed Rule: "We, the U.S. Fish and Wildlife Service, propose to list *Arabis georgiana* (Georgia rockcress), a plant species in Georgia and Alabama, as threatened under the Endangered Species Act of 1973, as amended (Act)." Final Rule: "We, the U.S. Fish and Wildlife Service, determine threatened species status under the Endangered Species Act of 1973, as amended (Act), for *Arabis georgiana* (Georgia rockcress), a plant species in Georgia and Alabama." With the "Summary of Changes from Proposed Rule" section in the published Final Rule providing no detailed listing of changes, instead providing only a one-sentence summary, "In this final rule, we made no substantive changes to the proposed rule." or, "Other than minor changes in response to recommendations, in this final rule we made no substantial changes to the proposed rule." or, All changes are largely editorial and are addressed in the response to peer reviewer comments (see Peer Reviewer Comments, above). or, The "Summary of Changes from Proposed Rule" section not found in the published Final Rule document

Minimal	No changes were made to the strength of listing action of the listing rulemaking, but limited changes were made to the content of the published proposed rule before the rule was finalized in the published final rule, such as updates/changes to the species biological or scientific information based on new or additional BAS or minor edits or technical corrections to biological information based on commenting and/or peer review Exemplars: Final Rule: "No significant changes have been made to the information presented in the proposed listing rule. Minor edits have been made to the biological information summarized above in the Background section of this rule based on new information received from the U.S. Forest Service and our survey efforts." and, Final Rule: "The following minor but substantive changes have been made to the listing rule and the Supplemental Document (available online at www.regulations.gov under Docket FWS–R5–ES–2013–0097) based on new information that has become available since the publication of the proposed rule, including information received through peer review and public comments. These changes did not alter our previous assessment of the rufa red knot from the proposed rule to the final rule." and, Final Rule: "This final rule incorporates changes to our proposed listing based on comments received that are discussed above and on newly available scientific and commercial information. We made some technical corrections and updated the formal recognition of the grotto sculpin as a unique species." and, Based on comments and information received from peer reviewers and the public, we are revising our discussions of the following specific biological information for Vandenberg monkeyflower: Dispersal ecology and pollinator ecology.
Some	No changes were made to the listing action of the listing rulemaking in the published final rule with regards to whether the species was listed as endangered or threatened, but revisions to a proposed special rule were made in the final rule which weakened or strengthened the regulatory action of the listing action Exemplars: Final Rule: "The 4(d) rule now exempts take of Dakota skippers caused by grazing on all non-federal lands in the United States; the proposed 4(d) rule did not apply to certain lands in Minnesota and North Dakota. The final 4(d) rule no longer exclude some counties from the part of the rule that exempts take caused by grazing."

Some	and, Final Rule: "We revised the 4(d) special rule in response to comments from the public, which helped us refine the covered farming activities. We have clarified the definition of ''normal farming practices'' and ''normal transportation activities'' to be consistent with relevant Oregon State laws. We also amended the list of covered activities to address specific agricultural practices in the Willamette Valley that may affect the streaked horned lark. Based on feedback from agricultural interests, we deleted several activities from the 4(d) special rule" and, Final Rule: "We have revised the 4(d) special rule based on Federal and State agency comments and public comments. The 4(d) special rule included in our final determination has been broadened from the proposed special rule and has increased the scope of activities and allowable timing of those activities occurring on airport and agricultural and ranching lands; increased the scope of activities occurring on single-family residential properties; more broadly allowed the control of invasive plants and noxious weeds; and included the addition of routine vegetation management activities and fencing along roadside rights-of-way." No changes were made to the listing action of the listing rulemaking, but changes regarding the designating of critical habitat were made between the proposed and final rules, such as proposing critical habitat designation in the published proposed rule but not finalizing that designation in the published final rule for the listing, instead stating the critical habitat designation would be finalized in a separate final rule Exemplars: Proposed Rule: "We, the U.S. Fish and Wildlife Service, propose to list Umtanum desert buckwheat (*Eriogonum codium*) and White Bluffs bladderpod (Physaria *douglasii subsp. tuplashensis*) as threatened, under the Endangered Species Act of 1973, as amended (Act). We are also proposing to designate critical habitat for both species under the Act." Final Rule: "We, the U.S. Fish and Wildlife Service, determine to list Umtanum desert buckwheat (*Eriogonum codium*) and White Bluffs bladderpod (Physaria *douglasii subsp. tuplashensis*) as threatened, under the Endangered Species Act of 1973, as amended (Act)." "The final critical habitat rule can be found elsewhere in today's Federal Register." and, Proposed Rule: "Accordingly, we propose to list the spring pygmy sunfish as a threatened species throughout its range and designate critical habitat for the species under the Act. In total, we propose approximately 8 stream miles (mi) (12.9 kilometers (km)) and 1,617 acres (ac) (654.4 hectares (ha)) of spring pool and spring-

Some	influenced wetland in Limestone County, Alabama, for designation as critical habitat." Final Rule: "We will finalize the designation of critical habitat for the spring pygmy sunfish in the near future." and, Proposed Rule: "We, the U.S. Fish and Wildlife Service, propose to list *Chromolaena frustrata* (Cape Sable thoroughwort), *Consolea corallicola* (Florida semaphore cactus), and *Harrisia aboriginum* (aboriginal pricklyapple) as an endangered species under the Endangered Species Act, and we propose to designate critical habitat for *Chromolaena frustrata*. We have determined that designation of critical habitat is not prudent for *Consolea corallicola* and *H. aboriginum*" Final Rule: "The October 11, 2012, proposed rule contained both the proposed listing of these three plants, as well as the proposed designation of critical habitat for *Chromolaena frustrata*. Therefore, we received combined comments from the public on both actions. However, in this final rule we will only address comments that apply to the proposed listing of the three species. Comments on the proposed critical habitat designation for *Chromolaena frustrata* will be addressed in the final critical habitat rule."
A Great Deal	Changes were made to the listing action of the listing rulemaking; i.e., a species proposed for listing as an endangered species in the published proposed rule was listed as a threatened species by the final rule Exemplars: Final Rule: "Based upon our review of the public comments, comments from other Federal and State agencies, peer review comments, issues raised at the public hearing, and new relevant information that has become available since the publication of the proposal, we have reevaluated our proposed listing rule and made changes as appropriate. Other than minor clarifications and incorporation of additional information on the species' biology and populations, this determination differs from the proposal in the following ways: (1) Based on our analyses of the potential threats to the species, we have determined that Gunnison sage-grouse does not meet the definition of an endangered species, contrary to our proposed rule published on January 11, 2013 (78 FR 2486). (2) Based on our analyses, we have determined that the species meets the definition of a threatened species. Subsequently, pursuant to this final rule, the species will be added to the list of threatened species set forth in 50 CFR Part 17" and, Final Rule:" Based on our review of the public comments, comments from other Federal and State agencies, peer review comments, issues raised at the public hearing, and new relevant information that has become available since the October 2, 2013, publication of the proposed rule, we have reevaluated our proposed listing rule and made changes as appropriate. Other than minor clarifications and incorporation of additional information on the species' biology and populations, this determination

A Great Deal	differs from the proposal in the following ways: (1) Based on our analyses of the potential threats to the species, we have determined that the northern long-eared bat does not meet the definition of an endangered species, contrary to our proposed rule published on October 2, 2013 (78 FR 61046). (2) Based on our analyses, we have determined that the species meets the definition of a threatened species. Therefore, on the effective date of this final listing rule (see DATES, above), the species will be listed as a threatened species in the List of Endangered and Threatened Wildlife at 50 CFR 17.11(h)." The proposed rule for listing a species was withdrawn in a published final action, ending or "aborting" the rulemaking process for the species. Exemplars: Finale Rule: "Based upon our review of the public comments, comments from other Federal and State agencies, peer review comments, issues raised by the wolverine science panel workshop, and other new relevant information that became available since the publication of our February 4, 2013, listing proposal, we have determined that the North American DPS of the wolverine does not warrant listing as an endangered or a threatened species. This document therefore withdraws the proposed rule published on February 4, 2013 (78 FR 7864), as well as the associated proposed rule under section 4(d) of the Act (16 U.S.C. 1531 et seq.) (78 FR 7864; February 4, 2013) and the proposed nonessential experimental population in Colorado, Wyoming, and New Mexico (78 FR 7890; February 4, 2013)" and, Final Rule" We, the U.S. Fish and Wildlife Service, withdraw the proposed rule to list Graham's beardtongue (*Penstemon grahamii*) and White River beardtongue (*Penstemon scariosus var. albifluvis*) as threatened species throughout their ranges under the Endangered Species Act of 1973, as amended. This withdrawal is based on our conclusion that the threats to the species as identified in the proposed rule no longer are as significant as we previously determined. We base this conclusion on our analysis of new information concerning current and future threats and conservation efforts. We find the best scientific and commercial data available indicate that the threats to the species and their habitats have been reduced so that the two species no longer meet the statutory definition of threatened or endangered species. Therefore, we are withdrawing both our proposed rule to list these species as threatened species and our proposed rule to designate critical habitat for these species."

APPENDIX C

Narrative Comment Analysis Codebook

Codebook for Issues Raised in Narrative Comments

Categories of Issues Raised in Narrative Comments	Description and Exemplars
Clarification/Correction	Commenter or peer reviewer wants clarification or a correction for listing documents; changes made by FWS in response do not impact the listing action Exemplars: "More clarification about the number of historical sites (as well as what constitutes a 'site') that have been resurveyed for all of these taxa is needed." and, "One commenter asked for clarification about whether the disturbance caps applied per unit or per landowner." and, "One commenter stated that several citations in the 2014 CA should be corrected including Kramer et. al 2011, which is not relevant to pollination of penstemon species." and, "Characterization of narrow pigtoe habitat is somewhat vague and seems to imply that this animal is a small to moderate-sized stream specialist." and, "One peer reviewer clarified that a cool, wet spring may have reduced herbivory on Graham's beardtongue, but effects on reproduction are not definitive." "The CNMI DLNR stated that the information presented in the proposed rule regarding the number of individuals of *Heritiera longipetiolata* on Saipan and Tinian is confusing. The DLNR urged the Service to contact local botanical experts directly for information, and provided the original reference for an occurrence on Saipan." and, "One peer reviewer requested that the Service add references to the published fisher habitat model into the final Species Report"

Clarification/Correction	and, "One commenter requested that data in Figures 6 through 9 of the proposed rule be more clearly stated" and, "The commenter requests clarification of the following statement from the economic analysis: 'costs associated with uncertainty and misperception of the regulatory burden imposed by critical habitat designation' and a definition of 'misperception of regulatory burden.'" and, "BLM asked for clarification on information the Service provided in the proposed rule (Page 60229), stating that, ''The remaining 460 ha (1,138 ac.) are open to ORV use.'' The BLM does not believe this statement is technically correct."
Procedural	Commenter questions if the required procedural process for listing was followed; questions if there should be a listing; questions if the listing will even alleviate threats to the species; questions why listed as threatened instead of endangered; questions the level of species that was listed, questions the distinction between the assignment of threatened or endangered; raises issue of lack of coordination between FWS and another agency; raises issue of lack of publicity/outreach regarding a type of permitting that could result in a lower threat to the species; asks for another regulatory mechanism to be added; Tribe commenter asking for consultation under Native American treaties and E.Os, S.Os; commenter maintains that listing is in conflict to other national policy, or state, county, or local polices/regulations; claims FWS is required to conduct species surveys; issues raised about tribal concerns not being addressed; suggest that the FWS collaborate with other organizations in the management of the species Exemplars: "One commenter stated that the Service did not follow its own guidance and policy regarding the peer review process for the proposed rules, citing the Service's Information Quality and Peer Review Guidelines" and, "One peer reviewer suggested that listing the Mount Charleston blue butterfly would not alleviate the most significant threats to the butterfly."

Procedural	and, "One peer reviewer urged us to protect Graham's and White River beardtongues by designating an Area of Critical Environmental Concern (ACEC)." and, "The Ute Indian Tribe (Tribe) asked us to comply with our treaty and trust responsibilities to the Tribe, the Executive Order on Government-to-Government Consultation, the Department of the Interior's Policy on Consultation with Indian Tribal Governments, and the Secretarial Order on American Indian Tribal Rights, Federal—Tribal Trust Responsibilities, and the Act." and, "One commenter stated they are concerned that we proposed to list a plant variety, rather than a species or subspecies. and, "The commenters suggested propagating species to increase their populations as an alternative to listing" and, "The State of Oregon asserted that listing the fisher would do little to protect the taxon, and that a federal listing would likely result in unintended consequences or disincentives for private landowners to engage in voluntary actions that may promote the conservation of the proposed DPS, including habitat protections." and, "The State indicated that listing would not address impacts from climate change, disease, or predation, the latter two of which are natural processes that affect all wildlife populations." and, "The Utah Office of the Governor and one other commenter stated that a federal listing of the species at this time provides no additional protection or resources from those already in place and that voluntary cooperation of private landowners will be much more effective in improving habitat than protections than what may be afforded by listing and critical habitat designation." and,

Procedural	"Some commenters asserted that many of the peer review comments do not support listing." and, "State fish and wildlife management agencies (Montana, Louisiana, and Tennessee) commented that the listing of the northern long eared bat should be limited to the portions of the range where decline has been documented." and, "Two commenters asserted that tribal concerns have not been addressed." and, "Commenters stated that the listing should not be used as a funding mechanism to conserve the species." and, "One peer reviewer questioned whether the northern occurrence of CPSD tiger beetle should be referred to as a population." and, "A few commenters suggest that the bi-State DPS is not a genetically unique subspecies or that this population does not meet our standard for recognition as a DPS." and, "Several commenters stated that we should have proposed listing the bi-State DPS of greater sage grouse as an endangered species as opposed to a threatened species." and, "The WVDEP/DMR requested that *additional time* be afforded to research existing museum, academic, and government crayfish collections to verify the distribution and abundance of the two species within their described ranges."

Underlying Science/Methodology	Issues raised is about the underlying science, species data and/or information, methodology used for the determination, including quantification/identification of existing species habitat, the methodology used to obtain the species data, information is questioned by the commenter(s); commenter makes an argument that the species can recover on its own, disputing the underlying science indicating the species is threatened or endangered; questioning of use of climate change models; commenter agrees with FWS conclusion that listing is warranted; i.e. implementation of the ESA was correctly done based on the underlying science; comments regarding solicited changes to original DPS configurations; concerns over combining populations into one DPS Exemplars: "Three species are clearly in serious decline and warrant endangered status: Alabama pearlshell, round ebonyshell, and southern kidneyshell. However, the southern sandshell and Choctaw bean appear to have among the largest extant ranges of any species covered in the proposed rule and remain extant in the Choctawhatchee, Escambia, and Yellow rivers drainages. This distinction needs more quantitative or more detailed biological justification." and, "Dredging, channelization, and snag removal and resulting streambed destabilization should be listed as the foremost threats to round pearlshell (reviewer meant round ebonyshell)." and, "They further asserted that our understanding of the amount of potential habitat may be a substantial underestimation of the actual amount…. only a small portion of Graham's beardtongue habitat, perhaps less than 1 percent, across its range has been surveyed and thus it is fair to assume the species can be in areas that have not been surveyed." and, "Four peer reviewers supported reconfiguration of the proposed DPS boundary to either Alternative 1 or 2 for one or more of the following reasons that they believe are biologically appropriate" and, "The commenter theorized that there would be significant implications for fisher conservation if the Service lumps into a single DPS fisher populations and habitat that are naturally

Underlying Science/Methodology	separated and which the commenter believes should not be combined." and, "One commenter insisted that reintroductions of fishers should be the Service's primary goal as opposed to listing under the Act" and, "One commenter stated that more State-specific data are needed considering the ambiguity and divergence across the range of the northern long-eared bat" (questioning underlying information) and, "One peer reviewer recommended updating the information in the proposed rule regarding collection of CPSD tiger beetles by amateur beetle collectors." and, "One commenter cites Knisley (2011, entire) as concluding that there is a lack of scientific evidence of the impacts of human-caused disturbances on CPSD tiger beetles, and available information is largely anecdotal and observational" (Coded as this rather than industry/recreational use as directly saying lake of scientific evidence)
New/Additional Species Data/Information	New/additional species data/information is submitted or raised in the commenting, including new species habitat range information which constitutes new species info; commenters ask for additional scientific data/information, or more accurate or rigorously obtained species data/information; commenting raises concern of additional or new threats to a species; suggestion for research program or specific additional species studies; asks for additional species surveys to be done; asks for more information to be available to the public (fisher observations) Exemplars: "One commenter provided a recent publication of a molecular study by Campbell and Lydeard (2012) titled, The genera of *Pleurobemini* (Bivalvia: *Unionidae: Ambleminae*). The study confirms the taxonomy of *Fusconaia burkei, F. escambia,* and *Pleurobema strodeanum*, and it reassigns *Fusconaia rotulata* to the new genus *Reginaia*." and,

New/Additional Species Data/Information	"A peer reviewer suggested we include additional information in the document regarding the Elba Dam and its impact on downstream hydrology" and, "One reviewer stated that there may be some commercial harvest of Alabama pearlshell, and asked if the Service has encountered any evidence for this claim." and, "The PLPCO stated that, since the oil shale industry will develop gradually, we should consider a research program to determine the beardtongues' ability to be propagated and moved into reclaimed areas." and, "The CNMI DLNR recommends that surveys be conducted in the near future to determine the current status of the occurrences of Heritiera longipetiolata that have been recently reported on Saipan, Tinian, and Rota." and, "One peer reviewer questioned whether reports of fisher observations could be made public in an online database, stating that doing so would aid in transparency." and, "On private lands, removal of deciduous trees and shrubs that favor conifers is likely a larger stressor on fisher habitat than the species report recognizes."
Critical Habitat Identification/Designation	Issue raised is specific to the critical habitat of the species and/or critical habitat designation, not species habitat (species habitat information is coded as underlying or additional/new scientific information); commenter makes the argument that the critical habitat of the species will be less impacted than stated in the proposed rule; issue raised is about stated critical habitat; issues raised about habitat occupied by industry; critical habitat designation would benefit by stimulating various level govt agencies to cooperate more to address species threats Exemplars: "We believe combining units AP2 and GCM1 would be an inaccurate representation of the Alabama pearlshell's range and habitat."

Critical Habitat Identification/Designation	and, "Commenters further stated that the land occupied by surface mining at any one time would be a small fraction of the habitat area, and mining areas would be rapidly reclaimed". and, "The boundaries of the critical habitat units seem somewhat arbitrary. The reviewer asserted that separation of the basins into these units artificially inflates perceived fragmentation and discontinuities in the system." and, "One comment suggests that critical habitat could be a stimulus for getting local, State, and Federal resources agencies to cooperate to address threats" and, "The reviewer suggested that we must protect all areas with potential habitat and sites of the host plants, not just the karst towers towards the cliff lines." and, "One peer reviewer asked why the Service needed to designate critical habitat for the CPSD tiger beetle when critical habitat is already designated for Welsh's milkweed." and, "One commenter found the economic analysis seriously flawed in that it focuses mainly on the costs of the Act's Section 7 consultations, development of incidental take permits (federal and state enforcement), and consumer surplus losses. The commenter requests that the analysis investigate and analyze the effects on local businesses in Kane County and surrounding areas" (not coded as economic as the issue is raised with respect to the critical habitat designation included in the proposed rule, not raising an economic impact issue with the listing itself
Economic/Industrial/Business Also includes: Military Activities Infrastructure/Forest Management/Recreational Uses	Commenter makes an economic argument when commenting on the listing, such as will cost the impacted area revenue or will result in additional expense to state/county/local agencies; commenting is in support of the industrial/business which is identified in the proposed rule as posing a threat to the species; commenter asks about how an existing project impacts on species, such as a water project, like a dam; claims industry uses best management

Economic/Industrial/Business Also includes: Military Activities Infrastructure/Forest Management/Recreational Uses	practices, high implementation and compliance rates; land management practices by Forest Service included under this category, as practices such as timber sales, are economic; also forest management treatments and fire suppression; military actions/activities/infrastructure; recreational use, tourism, as are economic drivers for the nearby communities; illegal marijuana industry (fishers); fire suppression activities; increases in unused habitat attributed to forest management and found under the subheading of "forest management"; road construction or relocation; commenter raises trapping specifically as an economic activity, not trapping for survey work; implications of fencing which creates perching places for raptors and corvids, which may increase predation ability; agricultural practices; large irrigation projects, such as the Blue Mesa Reservoir Exemplar: "One commenter stated that restricting development is in direct conflict with our Nation's energy policy. The commenter was concerned that he/ she would need to obtain a Federal air quality permit, which may include restrictions associated with these listings. This outcome would potentially stop oil and gas and oil shale mining activities on their land and impact their family income in excess of $1 million annually." and, "The listing of the eight mussels and designation of critical habitat in the Florida Panhandle Region will increase costs and time spent on Florida Department of Transportation (FDOT) activities due to the need to conduct mussel surveys, the need to have formal section 7 consultation with the Service, the need to hire specialized consultants to conduct the survey and perform the formal consultation, and the mandated time requirements of a formal section 7 consultation. The comment states that, due to the significant number of bridges needing replacement and the limited funds available, these increased costs and prolonged timelines will have an economic burden and will constitute a safety concern for the public." and, "The PLPCO and another commenter stated promising new production techniques for oil shale and tar sands will likely further reduce forecasted environmental impacts." and, "What is the status of the proposed Little Choctawhatchee River Reservoir?"

Economic/Industrial/Business Also includes: Military Activities Infrastructure/Forest Management/Recreational Uses	and, "Forestry best management practices protect water quality and habitat for species associated with riparian, aquatic, and wetland habitats." and, "Suspended solids from modern biological wastewater treatment plants are often comprised largely of organic matter, and such solids would generally not be expected to contribute significantly to sedimentation or contaminated sediment. and, "The Forest Service's land management practices are not responsible for potential declines, especially because the Forest Service has incorporated the Service's minimization measures" and, "One commenter supports the conclusions of the proposed rules that energy development including oil shale development and traditional oil and gas drilling poses a threat to the species." and, "The 2014 CA does not address threats where habitat is leased for both oil and gas development and oil shale development and does not provide information on existing surface disturbance" (could be coded as conservation effort, but since specific concerns CA not being sufficient to reduce industry threats) and, "The CNMI DLNR stated that the scope and timing of potential expansion of military training activities and possible impacts on proposed species on Tinian and Pagan is speculation at this time." and, "The CNMI DLNR stated that they have no evidence of ordnance directly impacting *Cycas micronesica* or *Heritiera longipetiolata* in the CNMI." and, "One peer reviewer believed that the draft Species Report overstated the scope and severity for the stressor of timber harvest in Washington."

Economic/Industrial/Business Also includes: Military Activities Infrastructure/Forest Management/Recreational Uses	and, "One peer reviewer commented that while a certain population had high tolerance for both fuels reduction and recreational use, other populations may not show the same tolerance." and, "One peer reviewer asserted that rodenticide exposure from illegal marijuana grow sites in northern California and southern Oregon is a significant concern, although they believe the magnitude of impacts in Oregon are far lower than California." and, "The peer reviewer also disagreed with the Service's discussion of wildfire suppression in the context of fisher habitat degradation (e.g., snag removal, fire breaks), stating it was more appropriate to view largescale wildfire suppression as the removal of a naturally ecological process that creates fisher habitat over the long term." and, "This commenter spoke of substantial areas of unused habitat throughout its range, which will continue to increase through Federal management, private conservation plans, and forest practice rules." and, "The commenter also provided information regarding the proposed relocation of sections of U.S. Highway 101 to areas of old-growth and mature second-growth forest within Del Norte Coast Redwoods State Park and Redwood National Park. The commenter asserted that such relocations could result in the permanent removal of fisher denning habitat, increased fragmentation, and increased mortality risk from vehicle collisions." and, "The peer reviewer stated that trapping, fur harvest, and predator control efforts were in fact responsible for the disappearance of fishers in the State, particularly in Olympic National Park where logging did not occur" and, "A peer reviewer noted that the proposed rule's analysis on non-renewable energy development is lacking." and,

Economic/Industrial/Business Also includes: Military Activities Infrastructure/Forest Management/Recreational Uses	"The reviewer did not think this assumption was correct. The commenter noted that differences in height between a fence post and a utility pole would theoretically result in different spatial scales of functional habitat loss due to differences in the distance from the perch a predator could see while perched." and, "One commenter stated that Blue Mesa Reservoir resulted in the largest habitat fragmentation in Gunnison County." and, "One commenter stated that aircraft-wildlife strikes pose a risk to aviation." and, "Peer reviewers and commenters stated that the assessment in the proposed rule of the impacts of winter recreation on wolverines understated the potential effect of this risk factor." and, "The proposed rule also suggests that research indicates that there is no effect of human activities, rather than that there is very little research on this factor." and, "One commenter expressed concern that listing the bistate DPS would impact culturally significant resources, specifically referring to pinyon pine seed collection." (Native American Tribes consider pinyon pine seed collection to be a culturally significant resource, i.e., seed crops)
Legal/Existing Regulatory/Conservation Mechanisms	A legal argument for or against the listing is put forth in the commenting; the commenter(s) asks for compliance with existing law/statute/treaty, with the commenter stating that existing regulatory mechanisms already in place are sufficient to protect the species precluding the need for listing; express support for 2014 CA (conservation agreement) in final action; protected conservation areas already in place or looked at by an authorized feasibility study; commenter mentions a lawsuit; species reintroductions, like with fishers; stated voluntary conservation efforts on private land as a result of likelihood of listing; issues raised on recovery plans/efforts after listing; veiled threat by State that listing will cause the State to reassess its conservation efforts for the species and might reallocate efforts to other species; disputes FWS has "on-the-ground experience" in the conservation of a species

Legal/Existing Regulatory/Conservation Mechanisms	Exemplars: "Several commenters stated there are sufficient regulatory mechanisms on BLM lands to protect the beardtongues, including protections through the OSTEIS and those applied as a BLM special status species" and, "The PLPCO and one other commenter stated we incorrectly indicated that no regulatory mechanisms exist with regard to Red Leaf's project on SITLA lands." and, "Another commenter stated the Consolidated Appropriations Act of 2008 placed a Congressional moratorium on all Federal oil shale leasing." (Actually, according to FWS that claim is incorrect, only removed funding for oil share regulation development and leasing for a year) and, "Commenters stated that we discounted existing efforts to protect the species by energy companies" and, "The CNMI DLNR provided an update to the protected conservation areas on both Rota and Saipan." and, "Additionally, there was a recent Federal law passed by Congress authorizing a feasibility study for a National Park monument on Rota." and, "Several commenters stated that the proposed rule was based on a lawsuit rather than science." and, "The peer reviewer asserted that reintroductions throughout California, Oregon, and Washington were the best method for reconnecting these populations to those in Canada." and,

Legal/Existing Regulatory/Conservation Mechanisms	"One commenter asserted that the past (i.e., the decade prior to 2014) likelihood of listing the fisher has had a positive effect on timberland owners voluntarily addressing numerous questions regarding the distribution and population status of fisher on their lands throughout California." and, "Lawsuits have prevented implementation of necessary fuel treatments." and, "To further the conservation and ensure recovery of fishers in the west coast States, the commenters suggested that a recovery team evaluate and propose how to contend with this subpopulation, with a recognition that further genetic research may be necessary." and, "The tribe mentioned that tribal lands in western Washington impose riparian protection where logging occurs and, in some instances, employ a reserve system that protects significant stands of late-successional forest." and, "The Utah Office of the Governor also noted that a final regulation providing for a listing will cause the State to reassess its conservation efforts for this species, and may result in reallocation of these efforts to other species." and, "One commenter asserted that the Service has no on-the-ground experience with Gunnison sage grouse conservation." and, "A few commenters stated that the Service did not consider the benefit offered to the species from protection of other listed species, such as the Indiana bat. One commenter further stated that because of this overlap in the ranges of the two species, there is no reason to list the northern long-eared bat."

APPENDIX D

The 11 Listing Rulemaking Decisions

The 11 Listing Rulemaking Decisions

Reasons stated for changes made to rulemakings:

A: Listing proposals which saw regulatory action(s) weakened:

1. Eight Mussels: Proposed rule, 76 FR 61481: *Endangered and Threatened Wildlife and Plants; Endangered Status for the Alabama Pearlshell, Round Ebonyshell, Southern Sandshell, Southern Kidneyshell, and Choctaw Bean, and Threatened Status for the Tapered Pigtoe, Narrow Pigtoe, and Fuzzy Pigtoe; With Critical Habitat.* The final rule (77 FR 61664) determined endangered species status for the Alabama pearlshell, round ebonyshell, southern kidneyshell, and Choctaw bean, and threatened species status for the tapered pigtoe, narrow pigtoe, southern sandshell, and fuzzy pigtoe, and designated critical habitat for the eight mussel species. The proposed rule listing action was weakened from endangered status to threatened status for the southern sandshell (*Hamiota australis*). FWS stated in the "Summary of Changes from Proposed Rule" section of the final rule (77 FR 61664), that the status of the southern sandshell was revised from endangered to threatened based on a "peer reviewer's comment and new survey data" (p. 61679).

2. Six Butterflies: Proposed rule, 77 FR 59518: *Endangered and Threatened Wildlife and Plants; Proposed Listing of the Mount Charleston Blue Butterfly as Endangered and Proposed Listing of Five Blue Butterflies as Threatened Due to Similarity of Appearance*. The final rule (78 FR 57750) determined endangered species status under the Endangered Species (ESA) for the Mount Charleston blue butterfly. The proposed listing action was changed to not finalize the threatened status for the lupine blue butterfly, Reakirt's blue butterfly, Spring Mountains icarioides blue butterfly, and

two Spring Mountains dark blue butterflies based on similarity of appearance to the Mount Charleston blue butterfly, representing a major change from the proposed rule action. As stated in the "Summary of Changes from Proposed Rule" section of the final rule (78 FR 57750), the protection provided to the Mount Charleston blue butterfly through the additional proposed listings was no longer advisable, as "similar or greater protection will be provided by the closure order [to collection in the Springs Mountains Natural Resource Area] issued by the Forest Service" (p. 57762).

3. Gunnison Sage-Grouse: Proposed rule, 78 FR 2485: *Endangered and Threatened Wildlife and Plants; Endangered Status for Gunnison Sage-Grouse*. The final rule (79 FR 69192) determined threatened species status under the Endangered Species Act (ESA) for the Gunnison sage- grouse (*Centrocercus minimus*). FWS determined threatened status, rather than endangered status, for the Gunnison sage- grouse, representing a major change from the proposed rule action. The final rule stated that as a result of new information and comments received on the proposed rule that FWS had reconsidered its prior determination in the proposed rule that the Gunnison sage-grouse was currently in danger of extinction, meeting the definition of an "endangered species". The FWS reconsideration focused primarily on the risk posed of current levels of residential development in Gunnison sage-grouse habitat, Factor A of the listing criteria, finding that the magnitude of the threat was lower than previously thought.

4. Northern Long-Eared Bat: Proposed rule, 78 FR 61045: *Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the Eastern Small-Footed Bat and the Northern Long-Eared Bat as Endangered or Threatened Species; Listing the Northern Long-Eared Bat as an Endangered Species*. The final rule

(80 FR 17974) determines threatened species status under the Endangered Species Act (ESA) for the northern long-eared bat (*Myotis septentrionalis*), representing a major change from the proposed rule action. The final rule stated that FWS reevaluated and made changes to the proposed listing rule based on review of the public comments, comments from other Federal and State agencies, peer review comments, issues raised at the public hearing, and new relevant information that has become available since the October 2, 2013, publication of the proposed rule. FWS determined that the northern long-eared bat currently met the definition of a "threatened species", rather than an "endangered species, as previously stated in the proposed listing rule.

5. 23 Guam and Marina Islands Species: Proposed rule, 79 FR 59363: *Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for 21 Species and Proposed Threatened Status for 2 Species in Guam and the Commonwealth of the Northern Mariana Islands*. The final rule (80 FR 59424) determined endangered status under the Endangered Species Act (ESA) for 16 plant and animal species from the Mariana Islands (the U.S. Territory of Guam and the U.S. Commonwealth of the Northern Mariana Islands) and threatened status for seven plant species from the Mariana Islands and greater Micronesia in the U.S. Territory of Guam, the U.S. Commonwealth of the Northern Mariana Islands, the Republic of Palau, and the Federated States of Micronesia (Yap), representing a major change from the proposed rule action. FWS stated that based on new information from further surveys, five plant species proposed for endangered status in the proposed listing rule are more numerous on the island than previous data indicated, indicating the five species are not quite as imperiled throughout their ranges as previously thought at the time of the proposed rule.

6. Two Crayfish: Proposed Rule. 80 FR 18710: Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Big Sandy Crayfish and the Guyandotte River Crayfish. The final rule (81 FR 20450) determined threatened status for the Big Sandy Crayfish and endangered status for the Guyandotte River Crayfish. FWS stated (81 FR 20459) that based on "new information on the Big Sandy Crayfish's distribution, its habitat, and analysis of the species' redundancy and resiliency, the Big Sandy crayfish does not meet the definition of endangered species contrary to the published rule".

B. Listing proposals which were withdrawn:

1. Tiger Beetle: Proposed rule, 77 FR 60207: *Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for Coral Pink Sand Dunes Tiger Beetle and Designation of Critical Habitat.* The final action (78 FR 61082) was a withdrawal of the proposed rule representing a major change from the proposed rule action. The U.S. Fish and Wildlife Service (FWS) withdrawal was based on the conclusion that the identified threats to the species were no longer as significant as believed at the time of the proposed rule based on analysis of current and future threats and conservation efforts. In the published final action (78 FR 61082), FWS found that "the best scientific and commercial data available indicate that the threats to the species and its habitat have been reduced below the statutory definition of threatened or endangered" (p. 61082).

2. Wolverine: Proposed rule, 78 FR 7863: *Endangered and Threatened Wildlife and Plants; Threatened Status for the Distinct Population Segment of the North American Wolverine Occurring in the Contiguous United States.* The final action (79 FR 47522) withdrew the proposed rule to list the distinct population segment of the North American

wolverine (*Gulo gulo luscus*) as a threatened species under the Endangered Species Act (ESA), representing a major change from the proposed rule action. The FWS concluded the previously identified factors affecting the DPS were not as significant as believed at the time of the proposed rule's publication (February 4, 2013), based on the FWS's analysis of current and future threat factors.

3. Two Beardtongues: Proposed rule, 78 FR 47590: *Endangered and Threatened Wildlife and Plants; Threatened Species Status for Graham's Beardtongue (Penstemon grahamii) and White River Beardtongue (Penstemon scariosus var. albifluvis).* The final action (79 FR 46042) withdrew the proposed rule to list Graham's beardtongue (*Penstemon grahamii*) and White River beardtongue (*Penstemon scariosus var. albifluvis*) as threatened species throughout their ranges under the Endangered Species Act (ESA), representing a major change from the proposed rule action. The FWS concluded that the identified threats to the species in the proposed rule were no longer as significant as previously determined. The FWS analysis of new information concerning current and future threats and conservation efforts found that the best scientific and commercial data available indicated that the threats to the species and their habitats had been reduced to the level that the two species no longer met the statutory definition of threatened or endangered species.

4. Greater Sage-Grouse: Proposed rule, 78 FR 64357: *Endangered and Threatened Wildlife and Plants; Threatened Status for the Bi-State Distinct Population Segment of Greater Sage-Grouse With Special Rule*. The final action (80 FR 22828) withdrew the proposed rule to list the bi-State distinct population segment (DPS) of greater sage-grouse (*Centrocercus urophasianus*) as threatened under the Endangered

Species Act (ESA), the proposed special rule under section 4(d) of the Act, and the proposed rule to designate critical habitat for bi-State distinct population segment (DPS) of greater sage-grouse, representing a major change from the proposed rule action. FWS found that the best scientific and commercial data available indicated that the threats to the DPS and its habitat were not as significant as believed at the time of publication of the proposed rule, given current and future conservation efforts. The identified DPS had been reduced below the statutory definition of threatened or endangered so the FWS proposal to list the bi-State DPS of greater sage-grouse as threatened with critical habitat was no longer warranted.

5. Fisher: Proposed rule, 79 FR 60419: *Endangered and Threatened Wildlife and Plants; Threatened Species Status for West Coast Distinct Population Segment of Fisher*. The final action (81 FR 22710) withdrew the proposed rule to list the West Coast Distinct Population Segment (DPS) of fisher (*Pekania pennanti*) as a threatened species under the Endangered Species Act (ESA), representing a major change from the proposed rule action. FWS's evaluation of the best scientific and commercial information available and an "extensive amount of information and comments received" (p. 22710) during multiple comment periods found that the stressors acting upon the proposed West Coast DPS of fisher and its habitat were not of sufficient "imminence, intensity, or magnitude to indicate that they are singly or cumulatively resulting in significant impacts at either the population or range wide scales" to indicate that the DPS was in danger of extinction (p. 22710). FWS concluded that the proposed West Coast DPS of fisher did not meet the statutory definition of an endangered or threatened species so withdrew the proposed listing rule for threatened status.