Brian Seasholes
The Endangered Species Act at 40: Species Profiles

BALD EAGLE

BALD EAGLE

(*HALIAEETUS LEUCOCEPHALUS*)
- In the Lower 48 States -

Range:

Historic: Much of the lower 48 states, as well as parts of Alaska, Canada and Mexico, especially those areas near coastlines, lakes and reservoirs and large, slow moving rivers.

When listed: Significantly less than historic range.

When reclassified in 1978: Slight increase from when listed.

When downlisted in 1995: Significant increase from 1978.

When delisting in 2007: Increase from 1995.

Listed status: Endangered (32 Federal Register 4001) 3/11/67 in the lower 48 states, except those eagles north of 40° North Latitude (an enormous regions of the country from approximately Philadelphia to half-way between Sacramento and the Oregon border), and then carried over to the ESA of 1973.

Change in status prior to delisting:

1) Status changed in 1978 [43 Federal Register 6230-6233] 2/14/78 due to taxonomic reasons. Previous to this rule there were two subspecies, *Haliaeetus leucocephalus leucocephalus* and *Haliaeetus leucocephalus alascanus,* separated by 40° North Latitude, "a line that was arbitrarily selected for the purposes of convenience" by the U.S. Fish and Wildlife Service (FWS).[1] With this rule both subspecies were combined into one species, *Haliaeetus leucocephalus*, which was then listed as endangered throughout its entire range in the lower 48 states, with the exception of WA, OR, MN, WI and MI, where it was listed as threatened.
2) Downlisted from endangered to the less imperiled status of threatened in the entire lower 48 states on July 12, 1995 [60 Federal Register 36000-36010].

Current status: Recovered [72 FR 37345-37372], 7/09/07.

Official reasons for listing: DDT-caused eggshell thinning, human caused habitat destruction and degradation, mortality from shooting, poisoning and electrocution.[2]

Population:

Historic: As many as 250,000-500,000 in all of North America, roughly 50,000-100,000 of which were in the lower 48 states

[1] U.S. Fish and Wildlife Service 1978a, p.6230.

[2] U.S. Fish and Wildlife Service 1983h, p.v.

When listed: Unknown, but in 1974 approximately 791 pairs

When status changed in 1978: approximately 1,000 pairs

When Downlisted from Endangered to Threatened in 1995: 4,712 pairs

When Delisted in 2007: Approximately 11,040 pairs.[3]

[3] Center for Biological Diversity 2007e.

Claims that the Bald Eagle is an Endangered Species Act Success Story

1) "The Endangered Species Act has been successful for thirty years. Without it, there might not be a single bald eagle…in our skies."—U.S. Representative John Dingell[4]

2) "The return of the bald eagle is a fitting cap to a century of environmental stewardship…Extinction is not an option, not for the eagle, not for other creatures put here by God."—then President Bill Clinton[5]

3) "Picture an America without its greatest national symbol, the bald eagle. But for the Endangered Species Act, it would be extinct."— Roger Schlickeisen, President, Defenders of Wildlife[6]

4) "Each of the species [one of which is the bald eagle] in this report have been saved from near extinction by the Endangered Species Act,"—Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Endangered Species Coalition, Natural Resources Defense Council, National Wildlife Federation, and U.S. PIRG[7]

5) "The Endangered Species Act is the most innovative, wide-ranging and successful environmental law that has been passed in the past quarter century. I can cite case after case…the fact that the skies are once again graced by many bald eagles…The opponents of the Act know these facts."—Bruce Babbitt, then Interior Secretary[8]

6) "Can you imagine America without the bald eagle?…It may sound extreme to suggest that the eagle was on a trajectory that would end in eradication, but that is exactly how it was in the 1970s for our national symbol… The bald eagle is among the act's most dramatic success stories. Down to only a few hundred breeding pairs by 1973, this bird has bounced back thanks to ESA-mandated programs, bringing the number of nesting pairs into the thousands."—Robert Perciasepe, Chief Operating Officer, National Audubon Society[9]

7) "What would be different today if Congress had never passed the Endangered Species Act in 1973? St. Louisans wanting to see a bald eagle in the wild would likely have to go to Alaska

---

[4] Dingell 2004.

[5] Council on Environmental Quality 2000.

[6] Schlickheisen 1996.

[7] American Rivers et al., 2003e.

[8] Babbitt 1994, p.54.

[9] Perciasepe 2003.

to do so."—Michael Bean Environmental Defense Fund, and David Wilcove, then with Environmental Defense Fund, currently a professor at Princeton University, writing in 1993 about the ESA.[10]

8) "[T]he law has saved numerous species from imminent extinction…[such as] the bald eagle…"—Sierra Club[11]

9) "The ESA and the protections provided within it have allowed our nation's symbol, the American Bald Eagle, to return from the brink of extinction."—Brock Evans, then Executive Director, currently President, the Endangered Species Coalition[12]

10) "The best example of success under the Act is the nation's symbol, the bald eagle."—Union of Concerned Scientists.[13]

11) "Fortunately, the Endangered Species Act has made an enormous impact…The bald eagle…[is] rebounding in the wild due to conservation efforts under the act."—World Wildlife Fund-U.S.[14]

12) "The Endangered Species Act has been this country's principle response to the accelerating loss of biodiversity. Without it we may well have lost a host of species already. With it we have accomplished some remarkable successes…Bald eagles…are no longer rarities."—Mark Shaffer, then-Vice President for Resource Planning and Economics, the Wilderness Society, currently Director of the Environment Program, the Doris Duke Charitable Foundation[15]

13) "As for the Act's success...While few species have yet fully recovered to the point where they can safely be removed from the Act's protection, many are well on their way to making dramatic recoveries. The bald eagle, symbol of the nation, is prominent among them."—Thomas Lovejoy, then Executive Vice President, the World Wildlife Fund-U.S., currently President, the Heinz Center for Science, Economics and the Environment, and Michael Bean Environmental Defense Fund.[16]

14) There are many other such false and misleading claims.[17]

---

[10] Bean and Wilcove 1993.

[11] Sierra Club. ND. Ecoregions: An Introduction.

[12] Evans 2004.

[13] Union of Concerned Scientists 1998.

[14] World Wildlife Fund 2004.

[15] Shaffer 1992, p.9.

[16] Bean and Lovejoy 1987.

[17] "We can still see bald eagles in the lower 48 states and other magnificent creatures…largely because of the Act."—Jamie Rappaport Clark, Executive Vice President, Defenders of Wildlife (Clark 2005a).

"It's safe to say that without the Endangered Species Act…bald eagles and a host of other bird species would not be rebounding today from years of habitat destruction and pollution."—Corry Westbrook, National Wildlife Federation Legislative Representative (National Wildlife Federation 2004).

"In assessing the effects of the Endangered Species Act, which first became law in 1973, the public has been distracted by confrontations involving the likes of the snail darter. But over the years remarkable progress has been made… Our national symbol, the bald eagle, has been removed from the endangered list."—Smithsonian Institution (Smithsonian Institution 1995)

"There is no clearer victory in the history of the Endangered Species Act."—Timothy Male, and ecologist with Environmental Defense Fund (Barringer 2006)

"There are a number of successes in the Endangered Species Act. The bald eagle…[has] been brought back from the brink of extinction."—then Senator Dirk Kempthorne, who was subsequently Interior Secretary (Kempthorne 1995)

"We've got a group of species that would almost certainly be extinct by now if it weren't for the protection of the Endangered Species Act…And all of them show increasing populations, they're on the rebound. In fact, we have a total of about forty-four members of the class of '67 that are now either recovered, well on the road to recovery or at stable populations because of the Endangered Species Act"—David Wilcove, then with Environmental Defense Fund currently Princeton University, talking about the first cohort of species, listed in 1967 under the ESA's predecessor, the Endangered Species Preservation Act of 1966, and then carried over to the ESA of 1973, one of which is the bald eagle. (National Public Radio 1993)

We owe the survival of the bald eagle...to the Endangered Species Act."—Eric Fischer, then Senior Vice-President, National Audubon Society. (Fischer 1992)

"In emphasizing the perceived flaws in the endangered species program, you ignore some of the real successes that have been achieved under this act. For example, the nation's symbol, the American bald eagle, is staging a dramatic comeback…In short, all is not gloom and doom. Progress is being made."—John Turner, then-Director of the U.S. Fish and Wildlife Service (Turner 1990.)

"But at only 30 years old, the Endangered Species Act has already scored major victories in species recovery," one of which is the bald eagle. "Each species is a monument to the effectiveness of the act and to those who, over the past three decades, have work [*sic*] to make the law a success for wildlife and for people in their communities."—John Kostyack, National Wildlife Federation. (DiSilvestro 2004, p.51.)

"America would no longer have its national symbol—the bald eagle—were it not for the safety net of the Endangered Species Act. The Act helped bring the majestic bird back from the brink of extinction after the pesticide DDT nearly wiped out bald eagle populations four decades ago."—Center for Biological Diversity (Center for Biological Diversity 2005)

Conservationists praise the ESA for saving creatures like…the very symbol of our national pride, the bald eagle, which survive[s] in the wild because of its protections.—William Robert Irvin, Director of U.S. Conservation, World Wildlife Fund-U.S. (Irvin 2004)

"This is a tremendous victory for the bald eagle and for the Endangered Species Act. There is no prouder symbol of our nation's commitment to preserving our natural heritage than the eagle. And there is no greater tribute to the Endangered Species Act than to allow its finest success story to fly off the list, free at last."—Michael Bean Environmental Defense Fund (Environmental Defense Fund Fund 1999b)

"America was the first nation on earth to pass a comprehensive law protecting endangered species, the Endangered Species Act, and once again we have shown that this landmark law works. Today the American bald eagle is back."—Bruce Babbitt, then Interior Secretary (U.S. Fish and Wildlife Service 1999d).

"The Endangered Species Act (ESA) is perhaps the most important piece of environmental legislation ever passed in the United States. The Act sets a high standard for the protection of threatened species that can be emulated around the world, and it can be credited with numerous success stories over its 30-plus year history. The recovery of the Bald Eagle…"—American Bird Conservancy (American Bird Conservancy 2006, p.19)

"The Endangered Species Act works. Since the law was enacted in 1973, we have saved many species from extinction, including the bald eagle."—Sierra Club (Sierra Club. ND. *The State of Disappearing Species and Habitat*)

"Eagles are one of the great success stories of the Endangered Species Act. With the protections we have given them and their habitat, they'll soon be ready for delisting."—Tom France, director of the Northern Rockies office of the National Wildlife Federation. (Associated Press 2003)

"There can be little doubt that protection under the Endangered Species Act has given species like the…bald eagle…a new lease on life."—David Wilcove, Michael Bean Susan Wilcox, and Ali Phillips of the Environmental Defense Fund (Wilcove et al., 1993., p.2).

"The bald eagle, verging on oblivion within the contiguous United States just a few decades ago, is now nearing recovery, thanks in large part to the ESA."—Defenders of Wildlife, Earthjustice, Endangered Species Coalition, and National Wildlife Federation (Defenders of Wildlife et al., 2002, p.4).

"It's [the bald eagle] one of the greatest success stories of the Endangered Species Act. We've brought it back in an extraordinary way."-Bruce Babbitt, then Interior Secretary (Newbart 1995).

"The Endangered Species Act is important not merely because it has broadened our conservation focus to include the great majority of species that had previously been neglected. It is important too because it has shown that the road to extinction can be reversed…The bald eagle, while still listed as an endangered species, is definitely on the rebound."—Michael Bean (Bean 1990a, p.viii.).

"The dramatic comeback of the [bald] eagle…is testament to the success of the Endangered Species Act, and to America's determination to protect and restore our native wildlife."—White House Council on Environmental Quality (Council on Environmental Quality. 2000).

"If you've ever seen a bald eagle soar, you know the exhilaration that such beauty, strength and grace can inspire. See the eagle's image on a postage stamp and it's unlikely to prompt the same response. Thanks to the Endangered Species Act, however, our children can witness the living symbol of our nation soar in the wild."—Jay D. Hair, then-President, National Wildlife Federation (Hair 1992).

"Where would they be now? These species might have disappeared during the past 30 years if the Endangered Species Act had not saved them…This law works. These 30 species, selected by a group of 11 conservation groups in celebration of the 30th anniversary of the Endangered Species Act, represent the hundreds of creatures the law has snatched from the threat of extinction….[such as the] bald eagle."—Roger DiSilvestro, National Wildlife Federation (DiSilvestro 2004, pp.48,51)

"As the challenges of the endangered species program have increased, so have the successes. The American bald eagle is making a remarkable comeback, the American alligator no longer requires Endangered Species Act protection, and the Aleutian Canada goose was recently reclassified from endangered to the less critical threatened category because of dramatic population increases over the years. These are just a few of the recent and highly publicized endangered species success stories." (U.S. Fish and Wildlife Service 1992b, p.3)

"The ultimate measure of success or failure of the Endangered Species Act, however, is whether the species that are the objects its concern face a more or less secure future. For some, prospects for survival are definitely brighter than they were fifteen years ago. The bald eagle, symbol of the nation, is making an encouraging comeback all across the country." (Bean 1988)

"Recovery actions encouraged by the ESA and supported by agency funding have helped to rescue several species from precarious status…including several high-visibility symbols of the ESA's appeal, such as the bald eagle…[and] American peregrine falcon" (National Research Council 1995, p.156)

"The good news about the recovery of these and other beleaguered species, from alligators to bald eagles…to gray whales, all has [*sic*] one thing in common—the U.S. Endangered Species Act (ESA). The ESA turned 30 years old in December, and since President Nixon signed it into law it has become the nation's most effective and practical means for protecting vanishing species." (National Wildlife Federation 2004).

"Bald eagles…[and] a range of rare creatures are better off today thanks to the Endangered Species Act" (Milius and Johnson 1992, p.50).

"Since 1973, the Endangered Species Act has served as a safety net for species on the brink. Thanks to the Act, the bald eagle, the American alligator, the brown pelican, the peregrine falcon, black footed ferrets, California condors, and many other

species have had their march toward extinction halted." (Defenders of Wildlife. ND. Help Save Our Endangered Species).

"The Endangered Species Act has been wildly successful in preventing the extinction of many magnificent creatures including grizzly bears, wolves, manatees, sea otters and the bald eagle." (Defenders of Wildlife. ND. Help Save Our Endangered Species).

"If we are able to save a single species man has brought to the brink of extinction, then we have been successful. In fact, the Act's record is even better: Bald eagles…are making solid comebacks," Randall Snodgrass, then director of wildlife policy, the National Audubon Society currently Director of Government Relations, the World Wildlife Fund-U.S (Horton 1992, 68)

"Since its enactment little more than two decades ago, the Endangered Species Act has yielded a long list of success stories. The proposed downlisting of America's national symbol, the bald eagle…testif[ies] to the Act's effectiveness."—Defenders of Wildlife (Snape and Ferris 1995, p. vi.)

"Finally, the Act does what it sets out to do: conserve endangered species. It has helped save from extinction the bald eagle," the Endangered Species Coalition (Endangered Species Coalition 1992, p.4)

"Citizens of every state can see and enjoy first-hand some of the Act's many conservation successes. Our nation's symbol, the bald eagle, though still endangered in most of the United States, is making a dramatic comeback," Michael Bean Environmental Defense Fund (Bean 1993a)

"Another false claim of some ESA opponents is that the act just doesn't work. Just look at the results in Texas…Before the ESA there were only seven breeding pairs of bald eagles in Texas, but in 1992 there were 37 breeding pairs."—Tom Maddux, chair, National Forest Protection Campaign of the Sierra Club's Lone Star Chapter (Maddux 1993).

"**The ESA is a remarkable success.** There are more bald eagles, American alligators, peregrine falcons, California sea otters, red wolves, brown pelicans, black-footed ferrets, Aleutian Canada geese, and whooping cranes alive today in areas where the ESA protects them than at any time in the past quarter century."—Michael Bean Environmental Defense Fund (Bean 1995).

CONSERVATION OF THE BALD EAGLE

INTRODUCTION

The recovery of the bald eagle is something to celebrate. As the national bird of the United States, the bald eagle represents the pride that many Americans feel towards their country and its wildlife. Unfortunately, the eagle's recovery has been marred by false and misleading claims about the conservation of this magnificent bird under the Endangered Species Act (ESA).

The bald eagle is the Endangered Species Act's highest profile species. Due to its prominence, the Act's supporters have put perhaps more effort into claiming the eagle as an ESA success story than for any other species. Furthermore, the eagle's status as the single most recognizable species listed under the ESA has made the stakes over whether and to what degree it has been conserved by the Act the highest for any endangered or threatened species. As a result, the ESA's proponents have made what are likely their most extravagant and misleading claims about the Act's role conserving a species in the case of the eagle.

The conservation of the bald eagle is both more nuanced and less due to the ESA than advocates of the Act admit. To examine the issues relating to the eagle's conservation, this profile will touch on thirteen topics.

1) The ban of the pesticide DDT in 1972 is the paramount reason for the eagle's recovery, not the passage of the ESA in 1973.

2) The role played by ESA related habitat conservation may have caused more harm than good on private lands, which is where most bald eagle nests exist. Habitat conservation on public lands was likely beneficial.

3) Advocates of the ESA misleadingly conflate habitat conservation with the paramount importance of the DDT ban.

4) 70% of the eagles in the lower 48 states received no protection from the ESA for four years, from 1973-1978, which diminishes the necessity of the Act in the eagle's conservation because this was the time period during which the eagle's status was perhaps most precarious.

5) States and private organizations were largely responsible for reintroductions, not the FWS.

6) States largely carried out population surveys, not the FWS.

7) The presence of around 70% of the bald eagle's entire population in Alaska and British Columbia Canada belies claims by ESA proponents that the species was headed for extinction.

8) Laws other than the ESA and the eagle's charisma had much to do with declines in shooting mortality and therefore diminish the importance of the ESA.

9) The ESA was key to banning lead shot for waterfowl hunting, which was beneficial to the bald eagle.

10) The creation by the FWS of multiple recovery regions was a waste of valuable resources.

11) The eagle's delisting was delayed due to a desire not to lose the bald eagle as both a tool for land-use control and fundraising.

12) The FWS delisted the bald eagle in name only due to the transfer of much of the ESA's land-use control provisions to another federal law.

13) The post-delisting monitoring plan was excessive and a waste of scarce resources.

DDT

The bald eagle is one of the ESA's "DDT birds," meaning the banning of the pesticide DDT (Dichloro-diphenyl-trichloroethane) in 1972, not the passage of the ESA in 1973, is the paramount cause of its population increase. As with the other DDT birds have been delisted (Arctic peregrine falcon, American peregrine falcon, Eastern brown pelican, and California brown pelican), banning DDT is widely recognized as by far the most significant cause of their rebound.

PEER REVIEWED LITERATURE

The banning of DDT was the single most significant cause of the eagle's resurgence. DDT, specifically its metabolite DDE, or form into which it would break-down, caused eggshell thinning that was especially pronounced in piscivorous birds like the pelican, carnivorous birds like the peregrine falcons and birds like the bald eagle that are both (for the sake of simplicity,

the acronym DDT will be used when referring to the pesticide and its metabolites). Thin-shelled eggs were susceptible to breaking and infertility. This led to widespread reproductive failure in bald eagles, which in turn led to a population crash. The relationship between DDT and bald eagle's decline and subsequent increase is very well established by a large and authoritative body of peer reviewed literature.[18]

EXPERT OPINION

Expert opinion reflects what peer reviewed literature has established; the paramount role of the DDT ban in the bald eagle's resurgence. "DDT and most related chemical compounds were banned from general use in the United States in 1972. This single event has been the major reason for the steady increase in numbers and productivity rates in the bald eagle population" in the Chesapeake Bay region, stated Brian Watts, professor of biology and Director of the Center for Conservation Biology at the College of William and Mary.[19] "Researchers believe that the main reason for the increasing count is the population rebound after the pesticide DDT was banned in 1972," explained Karen Steenhof, wildlife biologist with the U.S. Geological Survey, and the lead researcher for the 1996-2000 nationwide midwinter bald eagle count. "Declines associated with pesticides during the 1950s may have been more severe in the Northeast than in other parts of the country and may be the reason counts are increasing more there than elsewhere in the country."[20] The FWS's own recovery plan for the bald eagle in the Chesapeake Bay Region (CBR) acknowledges the primacy of the ban. "Bald eagle populations began to recover throughout their range after the 1972…ban of DDT. The CBR bald eagle population has increased from 80 nesting pairs in 1970 to over 230 pairs in 1990. This comeback is attributed primarily to reduction in the use of environmental contaminants."[21]

---

[18] Krantz et al., 1970; Mulhern et al., 1970; Anderson and Hickey 1972; Belisle et al., 1972; Wiemeyer et al., 1972; Grier 1974; Cromartie et al., 1974; Prouty et al., 1977; Kaiser et al., 1980; Grier 1982; Wiemeyer et al., 1984; Nisbet 1989; Grubb et al., 1990; Wiemeyer et al., 1993; Bowerman et al., 1995; Elliott et al., 1996;. Elliott et al., 1998.

[19] Watts 1999, p.8.

[20] U.S. Geological Survey 2003.

[21] U.S. Fish and Wildlife Service 1990e, p.1.

Even many of the ESA's staunchest supporters acknowledge the paramount importance of the DDT ban. "Nearly everyone agrees that the key to the eagle's resurgence—even more so than the Endangered Species Act—was the banning of the use of the insecticide DDT in this country in 1972," admits the National Audubon Society.[22] There are other such similar statements by other environmental pressure groups,[23] as well as the FWS.[24]

POPULATION DATA

In addition to peer reviewed literature and expert opinion, population data also helps establish the paramount importance of the DDT ban to the bald eagle's resurgence. In order to understand these data it is necessary first to grasp why there is a time lag between the increased

---

[22.] Graham 1994, p.37.

[23] "Bald eagles...told us we were poisoning the earth with DDT. We stopped and the birds are back," asserts Mark Shaffer, then an ecologist with the Wilderness Society and currently Director of the Environment Program for the Doris Duke Charitable Foundation (Shaffer 1992, p.8.); "The use of the pesticide DDT in this century poisoned eagles' foods and weakened eggshells, making them too thin to support the weight of brooding parents," notes the National Parks and Conservation Association. "A 1972 ban on DDT led to gradual improvements in population." (National Parks and Conservation Association. ND. Wildlife Facts); "With DDT no longer in use, bald eagles that were once threatened with extinction in the contiguous 48 states have increased from roughly 400 nesting pairs in 1963 to more than 5,700 pairs today," according to the National Wildlife Federation. "As a result, the federal government in July formally proposed removing them from the country's Endangered Species List." (Lipske 2000, pp.49-50); Under the heading of "Status and Conservation" of the bald eagle, the National Audubon Society stated, "Threatened (as listed by the U.S. Fish and Wildlife Service). Recent data shows Bald Eagle to have healthy populations; thus it may be time to down-list Bald Eagle from Threatened. After near extinction only two decades ago, populations nationwide are increasing due to federal restrictions on DDT and other pesticide use." (National Audubon Society. ND. *Species Profiles: Bald Eagle*); "The ban on DDT—without which the recovery of the bald eagle would never have occurred..." (Bean 1994a).

[24] In 1990 the FWS noted the use of DDT, "is generally believed to have been the most deleterious impact to bald eagle populations," and the banning of DDT was "pivotal" to the eagle's rebound (U.S. Fish and Wildlife Service 1990a, p.4210). The FWS concedes that the bald eagle "had been decimated by the ingestion of DDT," but makes to mention of the 1973 ESA.(U.S. Fish and Wildlife Service 1995a, p.3) "The number one factor has been the ban on DDT," said Keith Cline, FWS eagle specialist, of the bald eagle's increasing population. (Karwath 1986) The FWS acknowledges not only paramount importance of DDT but accurately identifies when it was banned:

> "Subsequent to World War II, the use of dichloro-diphenyl-trichloroethane (DDT) to control mosquitoes became very widespread along coastal and wetland areas. This had a drastic effect on the bald eagle, and as a result of foraging on contaminated food, the species' population plummeted. It was determined in the later 1960's and early 1970's, that DDE, the principal breakdown product of DDT, built up in the fatty tissues of adult females. This prevented the calcium release necessary to produce strong eggshells, and consequently, caused reproductive failure. In response to the decline, the Secretary of the Interior, on March 11, 1967, listed those populations of the bald eagle south of the 40th parallel as endangered under the Endangered Species Preservation Act of 1966. However, the decline continued until DDT was banned from use in the United States on December 31, 1972." (U.S. Fish and Wildlife Service. ND. Bald Eagle)

use of DDT and its negative effects on bald eagle reproduction and why the converse is true; why declining usage or an abrupt stop in the use of DDT also has a time lag effect. There are two reasons for this time lag. First, it simply took a few years after the introduction of DDT in the 1940s for the pesticide to work its way through the food chain. This delayed effect was especially apparent with top-of-the-food-chain predators like the bald eagle because as DDT works its way up the food chain it bioaccumulates, which means with each successive "link" in the food chain DDT becomes more concentrated. So it took a few years for sufficient amounts of DDT to bioaccumulate in female eagles for there to be noticeable decreases in eggshell thickness and hence reproductive success. The same process worked in reverse after 1959 when DDT usage peaked and especially after the 1972 DDT ban. Given DDT's persistence in the environment and that the pesticide bonds itself to fatty tissues in eagles, as well as other birds, it took a number of years for DDT to dissipate from the ecosystems in which it was present, as well as from the eagles themselves.

Second, bald eagles typically do not reach sexual maturity until at least five years of age. In regions where significant eagle populations exist, and therefore competition for nest sites occurs, eagles may not breed successfully until they are six to seven years old.[25] The combination of these two factors—the years it took DDT to diminish in bald eagles and the ecosystems in which they lived, and the five to seven years it typically takes before eagles reproduce successfully—meant that there was a time lag, of at least five to seven years, between the DDT ban in December 1972 when a marked upswing in the population could be expected.

Due to these factors, DDT was likely still impairing reproduction into the mid-to-late 1970s. This pattern of delayed population resurgence following the banning of DDT has been confirmed by peer reviewed data, most notably research carried out in northwestern Ontario, Canada and published in the prestigious journal *Science*. The study found that bald eagles reached a reproductive low point in 1974 but rebounded to healthy, near pre-DDT reproductive rates by 1981.[26] "I would not expect to see a natural fluctuation in this population on the order that appears to have been caused by the introduction and subsequent withdrawal of DDT,"

---

[25] Buehler 2000, p.19.

[26] Grier 1982, p.1232.

according James Grier, the study's author.[27] DDT was all but banned in Canada in 1969, three years prior to in the U.S. Therefore one would expect Canada's bald eagle populations to rebound from the DDT-induced population crash sooner than eagles in the U.S., even though there were a number of confounding variables.[28]

Given that it took approximately twelve years for Canadian bald eagles to achieve pre-DDT reproductive rates, the same general time frame can be applied to bald eagles in the lower 48 states of the U.S. This would mean that bald eagles in the lower 48 would not be expected to have achieved pre-DDT reproductive rates until approximately twelve years after the 1972 ban, which would have been the 1985 breeding season.

This assumption about the response of bald eagle populations in the lower 48 states to the banning of DDT is borne out by available data on DDT usage and by bald eagle population numbers as well. DDT began to be used in the U.S. in 1944, peaked in 1959 at 35,765 metric tons, and then steadily declined so that by the time the pesticide was banned in 1972, use was around 10,000 metric tons annually.[29]

The year 1963 is commonly cited as when the bald eagle's population in the lower 48 states reached its low point with a total of 417 pairs. This figure was the result of a survey by the National Audubon Society, but as the FWS admits it was only a "partial survey."[30] The first near comprehensive survey of the lower 48 states occurred in 1974 when the FWS and a number of state conservation agencies as well as private groups like Audubon counted 791 pairs.[31] Given that the 1963 survey was incomplete, it is unclear whether the population trend between then and 1974 was positive. The next survey of the entire lower 48 states occurred in 1981 when 1,188 pairs were counted. The following year the population increased to 1,480 pairs.[32] No survey of

---

[27] Grier 1982, p.1234.

[28] One such variable is that bald eagles in regions like northern Ontario likely migrate south, including to the U.S., for the winter. This would mean that even after DDT was essentially banned in Canada in 1969 many Canadian bald eagles were still ingesting DDT when they migrated to the U.S. Even so, many Canadian bald eagles would likely have ingested less DDT than their American counterparts because they would spend at least six months of the year in Canada, and because DDT was less widely used in Canada than in the U.S.

[29] Nisbet 1988, p.356.

[30] U.S. Fish and Wildlife Service 2004b.

[31] U.S. Fish and Wildlife Service. ND. *Bald Eagle Pairs*.

[32] U.S. Fish and Wildlife Service. ND. *Bald Eagle Pairs*.

the entire lower 48 was carried out in 1983, but the 1984 survey counted 1,757 pairs. No survey occurred in 1985, but from 1986-2000 annual surveys of the lower 48 were conducted, with the population increasing from 1,875 pairs in 1986 to 6,471 pairs in 2000.[33] Bald eagles in the lower 48 states appear to have followed the general pattern found in the study of bald eagles in Ontario, Canada; 5-10 years after DDT was banned, the population "turned the corner" and began to increase markedly.

MINIMIZING, AND EVEN DENYING, THE IMPORTANCE OF THE DDT BAN

Faced with overwhelming evidence of the paramount importance of the DDT ban, the FWS, environmental pressure groups and others have tried to diminish this in misleading attempts to elevate the importance of the Act. While there is some variation to these arguments, they all try to make the same basic point; the sum total of conservation measures for which the ESA is purportedly responsible have been as, or more, significant to the eagle's rebound than the DDT ban.

A case study of these tactics is statements by the Environmental Defense Fund's Michael Bean regarded as one of the foremost experts on the ESA. As with other ESA proponents, Bean made accurate and candid statements about the paramount role played by the DDT ban in the bald eagle's conservation, but over time his statements about this topic grew more inaccurate and misleading. The general pattern is that prior to when the ESA became such a hot-button issue, advocates of the Act were more likely to be frank and honest about the role of DDT. But, starting around the late 1980s and early 1990s, as the ESA generated increasing controversy, supporters of the Act became more sensitive to portraying the Act in a favorable light even if doing so meant making false and misleading claims.

Michael Bean's statements about the importance of the DDT ban tend to follow this pattern. In the 1980s, he made several accurate statements about the primarily importance of the DDT ban.[34] Then, starting around the early 1990s, Bean altered his line—de-emphasizing the

[33] U.S. Fish and Wildlife Service. ND. *Bald Eagle Pairs*.

[34] "The eagle's recovery, however, almost certainly owes more to the banning of the pesticide DDT than to actions taken under the Endangered Species Act," Bean said in 1986 (Bean 1986, p.367). In 1988, to mark the 15th anniversary of the ESA's passage, Bean had this to say: "Near the top of anyone's list of once highly imperiled species that have made dramatic recoveries during that period are the bald eagle, peregrine falcon, and brown pelican. The recovery of all of these was made

importance of DDT ban by placing it on roughly equal par with the ESA—in order to keep pace with the changing political winds. The increasingly controversial ESA was set to expire on October 1, 1992, and growing opposition to the law in Congress, as well as portions of the country, meant that Bean's ultimate goal of making the law more onerous for landowners and resources users was an increasingly unlikely prospect. As a result, Bean as well as other of the ESA's advocates, started to make concerted efforts to paint the Act in the most favorable possible light. One way they did this was to diminish the overarching importance of the DDT ban in the resurgence of the "DDT birds," including the bald eagle, in order to elevate the importance of the ESA.[35]

---

possible by the success of EDF's initial battle to rid the environment of DDT. Because of its long commitment to species preservation, EDF has always made the effective implementation of the Endangered Species Act one of the top priorities of is Wildlife Program" (Bean 1988). Note that only DDT, and not the ESA, is mentioned. In 1990, Bean made another strong statement about the role of DDT: "The pivotal point in the battle to save the eagle was the decision in 1972 to ban virtually all uses of DDT. DDT was the principle culprit in the eagle's near disappearance because it accumulated in the food chain and caused eagles and other birds to lay eggs with thin shells that broke before hatching." Furthermore, Bean added; "In the end, we have gotten along fine without DDT. The sky never fell on the citrus or cotton industries, and neither have the public health fears materialized. We have saved the eagle (and a good many other birds as well) without inflicting economic injury on ourselves" (Bean 1990c).

[35] "Critics of the Endangered Species Act attribute the eagle's restoration to the banning of DDT, not to protective legislation," he said in 1992 (Horton 1992, p.68.). In addition to being unsubstantiated, this is basically a straw man argument, meaning that Bean set up a flimsy issue just so he could knock it down. Authorization for the ESA expired, but Congress appropriated funds to keep the program going, something it has done every year since. With the battle over the law's reauthorization gaining momentum, Bean had this to say on the occasion of the Act's twentieth anniversary in 1993: "From its earliest days, EDF has worked to protect imperiled species. The following are just a few of the many species that have benefited, and some of the interesting stories of their recovery," one of which was the bald eagle (Bean 1993b). "The pesticide DDT had a nearly catastrophic impact on many birds' reproductive success. [T]he bald eagle declined to a few hundred breeding pairs in the lower 48 states…EDF's success in securing a nationwide ban on DDT made possible the ongoing recovery of all these species. Today…there are more than 3,000 bald eagle nesting pairs in the lower 48 states…Victories like these could not have been achieved without the power of the Endangered Species Act. Renewal of the Act at full strength can set the stage for continuing victories on behalf of wildlife" (Bean 1993b.). As Bean well knew, the victory he cited—the resurgence of the bald eagle due to the banning of DDT—had absolutely nothing to do with the ESA. To label it as such was simply dishonest.

With this new way of packaging the story of the bald eagle's conservation—diminishing the importance of DDT or misleadingly implying that the DDT ban was linked to the ESA—Bean added some new wrinkles, most notably the conflation of the conservation under the ESA with the DDT ban. In 1994, he stated; "Symbol of our nation, the eagle has dramatically increased in numbers since gaining protection as either a threatened or endangered species throughout the 'lower 48' states. Two things have made the eagle's recovery possible. The first was the banning of DDT in 1972, for which EDF can take much credit. The second was an aggressive program of habitat protection, law enforcement, captive breeding, translocation, and public education. These actions were guided by several regional recovery plans" (Bean 1994a). Note how no effort is made to distinguish the *relative* importance of the DDT ban and the ESA. Instead these two factors are misleadingly presented as co-equal.

In 1994 Bean put forth another variation of this tactic. "I wouldn't mind crediting the eagle's recovery entirely to the DDT ban, since my organization was instrumental in bringing about the ban. But the truth is that while the DDT ban was a necessary first step for the eagle's recovery, it took much more to achieve today's remarkable success. Protection of nesting and roosting habitat, banning of the use of lead shot in waterfowl hunting (a source of lead poisoning in eagles), stringent

Around the same time Bean was changing his tune about the role of DDT in the resurgence of the bald eagle and the other DDT birds, the group for which he works, the Environmental Defense Fund, was only too happy to give DDT proper credit for the eagle's rebound. "The bald eagle—like the osprey, brown pelican and peregrine falcon—has enjoyed a dramatic recovery due in large part to the ban on DDT won by our founders."[36] As with Bean's statements, context explains why the Environmental Defense Fund made such a strong assertion about the overwhelming importance of DDT. It was made in the group's 2002 Annual Report, which marked the 35th anniversary of the organization's founding, the express purpose of which was to ban DDT. Therefore, Environmental Defense was eager to take credit for starting the process to get DDT banned. "In 1967, four scientists on Long Island set out to end the use of

---

penalties against killing eagles and selling their feathers, restrictions on the popular agricultural pesticide carbofuran and an aggressive program to reintroduce eagles into areas from which they had been extirpated are just a few of the vitally important actions that the Endangered Species Act made possible and without which the eagle's future would be much less secure" (Bean 1994c, p.21). If one knew little or nothing about the ESA one would likely think the DDT ban was relatively unimportant based on this statement. After all it is but one accomplishment compared to the minimum of five—apparently space constraints did not permit listing the fully tally—accomplishments taken under the aegis of the ESA. 1994 was a banner year, as Bean made yet another claim about the ESA and the bald eagle. "Our nation's symbol owes its existence to the ban on the pesticide DDT and to the protection of the Endangered Species Act. The 1972 ban—culminating EDF's first major effort to reduce pollution—was the essential first step in saving the bald eagle, which was on the brink of extinction in the continental U.S. 20 years ago. But that step alone does not fully account for its dramatic recovery. The Endangered Species Act played a key role in the bald eagle's recovery. The protection of habitat, restoration of eagles to the wild, fines for illegal killing, and the banning of lead shot and hazardous chemicals were just some of the actions made possible by the Act"(Environmental Defense Fund. 1994). This time Bean limited himself to four accomplishments for which he claims the ESA can take credit, but the thrust of the argument is basically the same. Then to mark the twenty-fifth anniversary of the ESA's passage Bean stated; "Amid the din of controversy over what should be done with the Endangered Species Act, it is sometimes easy to overlook the most important question: How are the species themselves faring? For some, the Act has secured much-improved prospects for survival…[T]he dramatic rebound of the nation's symbol, the bald eagle… demonstrate[s] that the Endangered Species Act's lofty goals are not pie-in-the-sky wishes but attainable objectives" (Bean 1999).

However, Michael Bean has not exhibited an entirely consistent pattern of statements on the relatively importance of DDT and the ESA. "Had our Congress then heeded the dire predictions of DDT's advocates, we would never have experienced the recovery of our national symbol, the bald eagle," Bean stated in 2003, the very time period in which he had seemingly abandoned admitting the primary importance of the DDT ban in favor of the more politically expedient argument of conflating conservation under the ESA with the ban (Bean 2003). What explains this seemingly inconsistent statement stems from the forum in which it was made, a Congressional hearing held by a very obscure subcommittee, the Subcommittee on Rural Enterprises, Agriculture and Technology, within the obscure umbrella committee, the House of Representatives Small Business Committee. Given that very few people, especially those who Bean perceives as his allies and target audience, would ever know about, much less read his committee testimony—especially those in the media who might report what he said—he was relatively free to make frank and candid statements about the ESA. By contrast, many of Bean's statements that reflect his "evolving" thinking on the role of the DDT ban and the ESA have been made in the newsletter of Environmental Defense Fund, the environmental pressure organization for which he works. In this context, Bean knew his remarks would be widely read, and many of these readers would be rank-and-file members with relatively little knowledge about the ESA but who could be easily swayed by him because they likely perceive him as knowledgeable about the act.

[36] Environmental Defense Fund 2003, p.2.

DDT, the pesticide Rachel Carson warned about in *Silent Spring*, and Environmental Defense was born," the organization stated.[37]

Michael Bean has also exhibited conflicting desires about the DDT ban and the ESA: on the one hand to credit the ESA with the bald eagle's resurgence; but on the other hand to credit his organization in bringing about the ban, which preceded the ESA. The ban "was a hugely important decision. It clearly was the decision that made possible the recovery of these species," Bean said about the DDT birds.[38] As with his employer, context explains his candidness. Bean's made this statement when he was marking the 25th anniversary of the DDT ban. Thus, he was not in pro-ESA mode, which is when he has a tendency to make misleading statements about DDT and the resurgence of the DDT birds. So when the occasion suits the Environmental Defense Fund and Michael Bean they correctly assert that the DDT ban was the most important factor in the bald eagle's rebound. But when Environmental Defense Fund and its staff are more concerned with political expediency, they misleadingly minimize the importance of the DDT ban in order to inflate the importance of the ESA.

Many of the ESA's supporters also make arguments similar to those made by Michael Bean the most common of which is to conflate the importance of conservation measures purportedly taken under the ESA with the DDT ban, despite the paramount importance of the ban.[39] Another ploy is simply to omit any mention of the date of the DDT ban in rather crude

---

[37] Environmental Defense Fund 2003, p.2.

[38] Loftis 1997.

[39] "Under the Endangered Species Act, the U.S. Fish and Wildlife Service (FWS) initiated captive-breeding programs and habitat protection. A 1972 DDT ban also helped," states the National Wildlife Federation (Milius and Johnson 1992, p.58.)

"[B]y the early 1960s…the species was in danger of disappearing from much of the country," states Defenders of Wildlife. "When the Endangered Species Act was passed, there were fewer than 800 pairs of bald eagles nesting outside Alaska. A ban on the pesticide DDT and the protection afforded by the act set the stage for a comeback befitting this majestic bird. Today, about 7,000 pairs of eagles are found in the 48 states—one of the most dramatic success stories in the act's history" (Cheater 2003). Note how by placing the DDT ban after the ESA's passage, Defenders implies the ESA preceded, and was therefore responsible for, the ban. Defenders also stated, "Although the ban on usage of the pesticide DDT had a positive impact on bald eagles, loss of habitat has been a major cause of the species' decline" (Defenders of Wildlife. ND. Endangered Species Act Success Stories).

"Although the federal ban on DDT in 1972 was a major factor in turning around the bald eagle's decline, the Endangered Species Act also played an essential role in its recovery," stated John Kostyack, Senior Counsel for the National Wildlife Federation (Kostyack 2005). Banning DDT was not *a* major factor, it was *the* major factor.

"In the 1950s and 60s, there was a population crash in some very visible bird species, namely the Bald Eagle, Peregrine Falcon, and Brown Pelican," observed the American Bird Conservancy. "Research showed that the culprits were organochlorine pesticides such as DDT, which caused eggshell thinning and dramatically reduced breeding success. As the Bald Eagle tumbled

efforts to link the ban to the ESA.[40] Historians use the term "erasure" for this type of attempt to rewrite history by omitting events. While admittedly crude, the fact that so many prominent pressure groups omit even mentioning the DDT ban provides a telling indication of the lengths to

---

towards extinction in the lower 48 states, the impetus for greater legal protection for the country's most imperiled wildlife mounted. In 1966 the Endangered Species Preservation Act was passed. This was strengthened in 1969, and in 1973 finally became the ESA." (American Bird Conservancy. 2006, p.4.)

There are yet more examples of these types of reasoning, such as statements by then-Interior Secretary Bruce Babbitt ("A good case study, representing the success of the Service's recovery efforts is the conservation of the bald eagle, our national symbol. Based on historical information available, these birds nested throughout the United States. In 1967, bald eagle numbers in the lower 48 States had dropped to approximately 417 nesting pairs. Population declines were attributed to habitat loss, illegal shooting, and the effects of DDT (a widely used insecticide) on reproductive success. In 26 years, the eagle rebounded to more than 4,000 nesting pairs in 1993. Additionally, scientists estimate that 5,000 to 6,000 juvenile bald eagles dwell in the lower 48 States.) and the FWS. (This species formerly nested throughout North America. Population declines were attributed to habitat loss, illegal shooting, and the effects of DDT on reproductive success. In addition to the DDT ban, the eagle benefitted from nest site protection, aggressive habitat management, and reintroductions. Many States have successfully reestablished nesting populations by translocating young birds from areas with healthy populations into suitable, unoccupied habitat. Public awareness campaigns and vigorous law enforcement have helped to reduce illegal shooting of eagles. Bald eagle numbers in the lower 48 States have increased from approximately 417 nesting pairs in 1963 to more that 4,000 pairs in 1993. In addition, there are an estimated 5,000 to 6,000 juvenile bald eagles in this part of the range. As a result of the significant progress toward recovery, on July 12, 1994, the Service proposed to reclassify the bald eagle from endangered to threatened in all but four States. Subsequent action reclassified the species as threatened in all of the lower 48 states.—1994 Report to Congress (U.S. Fish and Wildlife Service 1994h, p.24). When the FWS proposed to delist the eagle in 1999, the agency released a one page illustrated document titled, "Road to Recovery" that contained milestones in the bald eagle's resurgence. Yet the document makes no mention of the DDT ban, much less the ban's paramount importance. (U.S. Fish and Wildlife Service 1999j) Another notable claim was made by the Waterkeeper Alliance, not one of the more well-known pressure groups but for the fact that it is headed by Robert Kennedy, Jr., a high profile environmental leader due in large part to his politically famous family name. "In 1967 the American bald eagle, the national symbol of this country, was teetering on the brink of extinction throughout the United States," states the Alliance. "The bald eagle's imminent demise was being caused by habitat destruction, chemical (DDT) contamination and other environmental factors. In 1973 the Endangered Species Act (ESA) was enacted." The Alliance continued; "Since the passing of the Act, the number of bald eagle pairs has increased by eightfold, from approximately 791 pairs in 1974 to 5,948 nesting pairs in 1998. Thanks mainly to the success of conservation efforts implemented under the ESA, the Fish and Wildlife Service proposed in July 1999 to remove the bald eagle from the list of threatened or endangered species." (Waterkeeper Alliance 2002). Note how the eagle's population increase is framed in terms of the ESA's passage, not the DDT ban.

[40] To mark the 30th anniversary of the ESA's passage, most of the major environmental pressure groups—American Rivers, Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Endangered Species Coalition, Natural Resources Defense Council, National Wildlife Federation, and the U.S. Public Interest Research Group—published a report titled, *30 Years of the Endangered Species Act*, that contained profiles of thirty species purportedly helped by the ESA, including the bald eagle. The profile of the bald eagle gives a taste of report's accuracy. The only mention of DDT is in a section titled, "History of Endangerment." "The most drastic decline occurred from the 1950s to the 1970s. The widespread use of DDT and other organochlorine chemicals caused wholesale reproductive failure, and by the early 1960s, fewer than 100 bald eagles were nesting in the northeastern United States" (American Rivers et al., 2003e). Immediately following these two sentences is the section titled, "Road to Recovery."

> "The bald eagle first received federal protection under the Migratory Bird Treaty Act of 1918. It was subsequently listed under the first federal endangered species law in 1967. But it was not until the Endangered Species Act of 1973 was passed, under which the eagle was listed as endangered in most of the lower 48 states, that agencies began to implement conservation measures to protect the bird. Under the Endangered Species Act, the U.S. Fish and Wildlife Service (FWS) initiated a captive breeding program that produced birds for release into the wild. Habitat protection goals were included in federal bald eagle recovery plans. Under these plans, eagle populations were not considered recovered until a certain amount of breeding and wintering habitat was secured. Also, the plans designated buffers around nest sites. These habitat protection measures, which were only possible because of the Endangered Species Act, allowed reintroduction and monitoring programs to be successful" (American Rivers et al., 2003e).

which they will go to give the Act undue credit. Yet another tactic is to diminish the importance of the DDT ban by failing to place the ban in context, including the crucially important fact that the ban preceded the ESA's passage by one year, and that the ban was the paramount factor in the eagle's resurgence.[41] Pressure groups also use the trick of dating the bald eagle's rebound to federal endangered species legislation passed prior to the ESA of 1973. Therefore, it would appear that federal endangered species legislation was responsible for the DDT ban. Of course, this is not true, and it is quite ironic because it implicitly robs the ES Act of the very credit these groups are trying to give it.[42] Yet another tactic is simply to omit any mention of DDT, but

[41] "The bald eagle, our national symbol, was once abundant throughout the country," states the Endangered Species Coalition. "Their numbers began to decline with aggressive hunting and habitat loss. In the 1940s, eagles encountered a new threat from the use of pesticides, including DDT, which weakened their eggs. Under the ESA, the FWS launched a captive breeding program, monitoring program, habitat protection and nest site protection. Today, about 5,000 nesting pairs of eagles grace the skies across America" (Philips 2004). Another example of this approach has been offered up by the National Wildlife Federation. "By 1963, hunting, habitat loss and pesticide contamination had cut the species to just 417 nesting pairs in the continental United States. Under the Endangered Species Act, the U.S. Fish and Wildlife Service (FWS) initiated captive-breeding programs and habitat protection. A 1972 DDT ban also helped. The bird now numbers nearly 6,500 pairs in the Lower 48 and may soon be delisted" (DiSilvestro. 2004, p.50). This attempt by the Federation to minimize the importance of DDT is amusingly transparent. After a long sentence about conservation measures purportedly taken under the ESA, the DDT ban warrants a short sentence of only five words. The placement of the mention of DDT, the short mention of it, and the words used to characterize the ban, "also helped," is clearly a calculated effort to make the DDT ban appear relatively insignificant.

[42] "In 1967 (under the law that preceded the Endangered Species Act) and 1973 (when the ESA was enacted), the bald eagle was listed as endangered in the lower 48 states, except in five states—Michigan, Minnesota, Wisconsin, Washington, and Oregon—where it was listed as threatened," states the Sierra Club. (Sierra Club. ND. Species and Habitat). "Due to the protections of the ESA and the banning of the use of DDT, the bald eagle has begun to recover. In 1995, the U.S. Fish and Wildlife Service reclassified the bald eagle from endangered to a less imperiled threatened throughout all of the lower 48 states." Not only did the Sierra Club resort to the stock-in-trade misleading tactic of conflating conservation under the ESA with the banning of DDT, but a couple of factual errors undermine the veracity of the claim.

First, contrary to the claim about the dates on which the eagle was protected by federal endangered species laws, all bald eagles in the lower 48 states were not protected by the 1966 Endangered Species Preservation Act (ESPA), for which a list of protected species was finalized in 1967, or by the 1973 Endangered Species Act. Under the ESPA and initially under the ESA, all bald eagles north of 40º N. latitude were not listed and were therefore afforded no protection under these laws. As detailed below, it was not until 1978 that bald eagles in the lower 48 states north of 40º N. latitude were listed under the ESA. This error is significant because it implies that many bald eagles in the lower 48 states received protection under federal endangered species legislation since 1967 when in fact 50-64% of all the eagles in the lower 48 did not for another eleven years. The implication of the Sierra Club's erroneous chronology is twofold. One, that the longer a species is protected by federal endangered species law, the better it will do. Two, that the ESPA and the ESA were somehow linked to the banning of DDT because the Sierra Club only mentions the ban after stating that the bald eagle had been protected in the lower 48 states since 1967. Furthermore, the Sierra Club conveniently neglects to mention that the 1967 ESPA was a relatively weak law; only the Departments of Interior, Defense and Agriculture were required to conserve listed species but they were given the discretion of doing so only so long as it consistent with their overall objectives. In addition, the ESPA authorized land acquisition for protected species. But it is the first provision that drew the ire of pressure groups like the Sierra Club and the elimination of which, to make it mandatory for all federal agencies and federally permitted activities, was a major focus of efforts to write and then pass the ESA of 1973. But by invoking the ESPA, coupled with the failure to mention that the bald eagle north of 40º N. latitude in the lower 48 states was not listed under the ESA until 1978, the Sierra Club is tacitly admitting what truth actually is—that neither the ESPA or the ESA was necessary for much of the bald eagle's resurgence.

mention the ESA, in rather transparent efforts to give the ESA all the credit for the eagle's resurgence.[43] Pressure groups also try to obscure the overwhelming importance of the DDT ban by raising the specter of pesticides that came into use after DDT.[44] The paramount importance of the DDT ban is discomfiting to ESA supporters because they know that it deprives the Act of credit.[45] In addition to environmental pressure groups, many of those in the media have also minimized the importance of DDT, a case study of which are statements by Steve Curwood, host and creator of the syndicated public radio show *Living on Earth*.[46]

Second, in its profile of the bald eagle in which the above error was made the Sierra Club incorrectly spelled the second part of the bald eagle's scientific name, spelling it as "*leucocephaalus*," which contains one too many of the letter A. Thus the correct spelling is *leucocephalus*. Compared to the error about the dates by which the eagle was conserved, especially relative to the banning of DDT, this spelling error is of minor importance. It is, however, indicative of the Sierra Club's lack of sloppiness and lack of knowledge about the bald eagle.

[43] "Where would they be without the law?" asked the National Wildlife Federation. "[A] range of rare creatures are better off today thanks to the Endangered Species Act" (Milius and Johnson 1992, pp.50-51). As an example NWF offered this; "When the bald eagle was included on our national seal in 1782, it soared over what would become the entire Lower 48 states. By the mid-1970s, though, only about 1,000 breeding pairs still survived in a fraction of those states. Endangered species publicity gave the birds a big boost as American mobilized at federal, state and local levels to help protect the eagle. With the public's support and a successful recovery plan, the bird's population has tripled in the last deCade making it a candidate for removal from the federal list in certain areas" (Milius and Johnson 1992, p.58).

[44] "Ironically, deadly but short-lived poisons such as carbofuran have come into use largely to replace less acutely toxic but lingering pesticides such as DDT," states the National Wildlife Federation (Sachs 2004, p.22). "The devastating effect those earlier pesticides had on birds—especially predatory species such as the bald eagle—inspired Rachel Carson's 1962 manifesto *Silent Spring*, which in turn helped spur creation of the U.S. Environmental Protection Agency (EPA) in 1970 and passage of the Endangered Species Act three years later. Yet today, three decades after the act was passed, pesticides remain a threat to the recovery of the nation's endangered plants and animals." (Sachs 2004, p.22) By failing to mention the DDT ban, much less when it occurred, coupled with the current threat of pesticides to species like the eagle, gives the highly misleading impression that current pesticides are as detrimental, or even more so, to the bald eagle as DDT.

[45] For example, Michael Bean stated:

> Even the government's ability to use the Endangered Species Act to force the banning of hazardous pesticides like DDT would be put in doubt by the zeal of 'reformers' to elevate economic concerns over conservation goals. If banning DDT substantially diminished the value of land used to manufacture or store DDT or to grow crops on which DDT was used, the government would be required to buy out affected property owners. The ban on DDT—without which the recovery of the bald eagle would never have occurred—might never have been won if the 'reforms' now being advocated had been law a quarter century ago. For the American bald eagle, it is clear that the weakened Endangered Species Act being advocated by some in Congress would have impeded recovery, not advanced it (Bean 1994a).

Bean's attempt, like those of other pressure groups, to imply that the ESA had something to do with the ban on DDT is absurd. Since EDF was largely responsible for getting DDT banned, Michael Bean knows full well that the ESA had nothing to do with it—just as he knows that the "takings" compensation legislation he referred to applied to land use restrictions, and would likely not have impeded pesticide use restrictions. In fact, the only thing Bean and others who have tried to minimize the importance of DDT have been correct about is that the bald eagle in the lower 48 states would likely not have recovered without the ban on DDT.

[46] For example, in 1994 he used the stock-in-trade tactic of mentioning the ESA but not the DDT ban. "Just in time for Independence Day, the Federal Government has announced that it plans to remove our national emblem, the bald eagle, from the Endangered Species List in most of the country. Officially, the great raptor will be upgraded from endangered to threatened throughout all the continental US, except for parts of the desert southwest. A quarter century ago, the bald eagle was nearly extinct, but today it's one of the success stories of the embattled Endangered Species Act." (Curwood 1994).

Notwithstanding all of these efforts to minimize, or even deny, the significance of the DDT ban to the bald eagle's resurgence, the simple fact remains: the DDT ban was the paramount reason for the bald eagle's recovery.

DDT DENIERS

Along with ESA supporters, there is another group of people who have tried to diminish the paramount importance of the DDT ban. This other group, some of them scientists, most of them not, insists DDT and its metabolites had little, if anything, to do with the massive population crash of bald eagles, peregrine falcons, other raptors, and the brown pelican. Their view has no merit and is based on slipshod research and implausible conclusions. The leader of the DDT deniers was, until his death in 2004, Gordon Edwards, professor of entomology at San Jose State University in California. Edwards found a fellow traveler in Steve Milloy, a lawyer and biostatistician.

CONCLUSIONS ABOUT DDT

The evidence of DDT's role in bald eagle's decline is overwhelming, as is the evidence that the 1972 ban of DDT is the paramount reason for the eagle's ongoing recovery. The U.S. government and the environmental pressure groups are very well aware of these two facts, and when they choose to do so they acknowledge them and place them in the proper context. Unfortunately, the government and pressure groups usually are not so honest and forthcoming.

There are a couple other examples of his failing to mention DDT and cheerleading for the ESA. ("Twenty years ago, when the Endangered Species Act was passed, the bald eagle was at the verge of extinction in most states. But today, there are over 3300 nesting pairs, and the largest portion of them outside of Alaska make their winter homes on a part of the Pacific Flyway known as the Klamath Basin, in Southern Oregon. The return of the bald eagle to the Klamath Basin is one of the few unqualified success stories surrounding the otherwise controversial Endangered Species Act" (Curwood 1993). In 1998, however, Curwood not only mentioned the DDT ban but he put it in the proper context by stating very clearly that the ban preceded the passage of the ESA and that the ban was the "turning point" in the eagle's resurgence. ("The turning point came with the 1972 ban on the pesticide DDT that had caused eagles to lay eggs with thin shells. Since then, eagle populations have rebounded" (Curwood 1998). But Curwood's commitment to accurate reporting quickly vanished. His next report on the bald eagle, broadcast in 1999, resorted to failing to delineate the relative importance of factors contributing to the eagle's conservation, especially the paramount importance of the DDT ban. ("Later in the century, heavy use of pesticides, including DDT, which contaminated fish eaten by eagles, decimated the population. By the early 1960s there were fewer than 450 nesting pairs of bald eagles in the lower 48 states. Then, in 1972, DDT was banned. A year later the eagle was placed on the newly-created Endangered Species List. Under Federal protection, the bird began to recover" (Curwood 1999).

Instead, they misinform and mislead in efforts to give the ESA undeserved credit, but these efforts cannot escape the simple truth about the paramount role played by the DDT in the bald eagle's decline and resurgence in the lower 48 states.

HABITAT CONSERVATION

It is possible that the use of the ESA's land-use control provisions have caused more harm than good to the bald eagle. The reason for this is that the ESA punishes landowners by devaluing property that has eagles and eagle habitat on it. As a result, landowners have strong incentives to get rid of eagles and their habitat. Most bald eagles in the lower 48 states nest on private land, and therefore eagles may well have been harmed by the ESA. The Act has, however, likely played a positive role on both federal lands, by requiring federal agencies to insure their activities do not harm eagles, and non-federal lands that require some sort of federal permit.

Bald eagles nest near water, and because of this they are subject to increased amounts of human disturbance than, for example, peregrine falcons, which tend to nest on relatively inaccessible cliffs. People like to build houses and recreate near the water, especially the type of habitat favored by nesting bald eagles; lakes, bays, estuaries, coasts, and broad, slow-moving rivers. The general intolerance of nesting bald eagles to human-caused disturbance, especially in more rural regions, has been well established by peer reviewed literature.[47] Eagles are sensitive to various types of disturbance, such as noise from motorized vehicles, including boats, and people on foot approaching too close to a nest. Excessive disturbance can cause an eagle pair to abandon their nest.

There are five components to the issue of habitat and the conservation of the bald eagle that will be examined; private lands, wintering habitat, public lands, bald eagles' tolerance to humans and human activities, and habitat creation and climate change.

[47] Mathison 1968; Stallmaster and Newman 1978; Grubb and King 1992; Grubb et. a. 1992.

PRIVATE LANDS

It is very possible the ESA did more harm than good for the bald eagle on private lands. This is because the Act's punitive regulations can substantially lower property values. Unfortunately, this creates strong incentives for landowners to make their property inhospitable to eagles by doing such things as cutting down the type of large, mature trees bald eagles favor for building nests and perching. This dynamic, otherwise known as the perverse incentives created by the ESA's punitive provisions, is especially acute for species like the bald eagle that depend heavily on private land. Private land, which consists of almost 75% of the land in the lower 48 states, represents the key to bald eagle conservation because most eagles that were listed under the ESA nested on private land. In states that consist of large percentages of private land, it is reasonable to assume that large percentages of the bald eagles populations also reside on private land.[48]

NESTING HABITAT

During the bald eagle's tenure under the ESA, the issue of habitat protection became an increasing source of conflict between those seeking to protect habitat and those engaged in a variety of existing or planned activities, such as timber cutting, recreation, and housing development. This dynamic was put into perspective by one of the foremost experts on the eagle. "Persecution from humans has declined in the last 20 years, and prime wilderness habitat has become occupied so eagles have started moving back into human-developed areas," stated David Buehler, professor of Wildlife Science at the University of Tennessee, and one of the

[48] For instance, as of 2003 around 75% of the 1,133 bald eagles nests in Florida occurred on private land.(Florida Fish and Wildlife Conservation Commission. 2006) As of 2005 Minnesota's population stood at 872 pairs, 63% of which existed on private and state lands, and the remaining 37% on federal land (Minnesota Department of Natural Resources. 2005). In Wisconsin, a state with broadly similar landownership patterns as Minnesota, as well as habitat types, it will be assumed that bald eagle nest patterns are roughly similar, which would mean that as of 2005 roughly 643 pairs were on private land and 377 on public land. Oregon, a state with a higher percentage of federal land, has a somewhat different distribution, according to the 2003 census of eagle nests; 51% federal, 35% private, 8% state; 4% county and municipal, and 1% Native American.(Isaacs and Anthony 2003) Distribution of nests in Washington is: 68% private; 24% "uncertain protection," meaning public or tribal ownership but land not necessarily specifically designated as "protected"; and 10% "protected," a designation that encompasses federal and states lands, such as parks and wildlife refuges, that are dedicated to wildlife and natural area conservation (Stinson et al., 2001, p.58). As of 1990, 84.5% of eagle nests in the Chesapeake Bay region, one of the eagle's strongholds, existed on private land (U.S. Fish and Wildlife Service 1990e, p.20). Other states with large eagle populations, such as Maine and Michigan, all consist of overwhelming percentages of private land, as do most states east of the Mississippi. Therefore, it is reasonable to conclude that the majority of eagle nests and habitat in the lower 48 states exist on private land. The picture that emerges is that the bald eagle is largely dependent on private lands, and this is germane to the ESA because it is very possible that the Act has done more harm than good to species on private lands.

foremost authorities on the bald eagle.[49] So while the bald eagle's population was gradually increasing and expanding its range over the past forty years, so, too, was the human population. These two trends were especially pronounced along lakes, bays, and large rivers; habitat coveted by people and eagles.

In regions with high rates of development, the ESA has been used to protect eagles. "Since the elevation of the bald eagle to the federal threatened and endangered species list in 1978, the Endangered Species Act has been the single dominant legal tool used to protect Chesapeake Bay eagles and their habitat," according to Bryan Watts of the College of William and Mary. "From a practical standpoint, layers of protection that have reduced the rate of habitat alteration have had the greatest impact on the recent recovery of bald eagles in the Chesapeake Bay."[50]

While Watts is as an authority on the eagle's biology and ecology, his assertion that the bald eagles in the Chesapeake Bay region did not receive protection under the ESA until 1978 is incorrect and calls into question his knowledge of the eagle's regulatory history. The entire Chesapeake Bay lies south of 40° North Latitude, the line of demarcation the FWS arbitrarily chose to observe when the ESA was passed 1973. The FWS did not list those eagles north of 40° Latitude under the ESA until February 1978, while the agency listed eagles south of 40° Latitude (more on this is in the section titled, "No Protection North of 40º North Latitude Until 1978"). Nevertheless, Watts's view of the ESA's importance conserving habitat is very similar to views held by other of the Act's proponents. These views apply not just to the Chesapeake Bay region but for much, if not all, of the lower 48 states, especially those regions that have large eagle populations and high rates of human development, such as the Chesapeake Bay, Puget Sound, and large portions of Florida.

It is, however, important when trying to determine whether the ESA's habitat protection provisions were beneficial or detrimental to the bald eagle to keep several factors in mind; the bald eagle's massive size and that it is easily recognizable, preference for nesting in large trees near waterways, and penchant for constructing enormous, conspicuous nests. Those arguing in favor of the ESA's habitat protection provisions would point out that these three factors have made identification of nests and surrounding habitat for protection relatively easy. Once a new

[49] Winkler 2002.

[50] Watts 1999, p.10.

nest was identified, the FWS could then determine if it was on or near private property, and if so, the agency would likely contact the landowner(s). When the FWS contacts landowners who have endangered species or endangered species habitat on their property, contact typically takes the form of rather threatening letters notifying the owners that should they so much as disturb the species or its habitat, they, the owners, will be subject to a severe penalties, as much as $100,000, and possibly a year in jail for each individual of the species, including young or even an egg, so affected. Not surprisingly, when confronted with this type of threat, most landowners decide to avoid any possible activity that could harm endangered species, including nesting bald eagles.

Those arguing that the ESA's habitat protection provisions caused more harm than good to the eagle point out that the characteristics of nesting eagles, most notably the ease of identifying eagles and their nests, made eagles vulnerable. The reason for this stems from the ESA's severe penalties, which can impose substantial costs, including property devaluation, on private landowners. The Act's ability to penalize landowners financially has created perverse incentives for landowners to make the habitat on their property inhospitable to endangered species or to engage in the "shoot, shovel, and shut-up" strategy. "I've seen eagle's nests where people climbed up the trees and knocked them out," stated Jodi Millar, FWS bald eagle recovery coordinator.[51]

The ESA's perverse incentives have also been observed by Michael Bean of Environmental Defense Fund. "There is, however, increasing evidence that at least some private landowners are actively managing their land so as to avoid potential endangered species problems," stated Bean in a closed-door seminar for FWS personnel.[52] "The problems they're trying to avoid are the problems stemming from the Act's prohibition against people taking endangered species by adverse modification of habitat. And they're trying to avoid those problems by avoiding having endangered species on their property." Bean then enumerated the various ways in which landowners make their property inhospitable for the red-cockaded woodpecker, an endangered species that inhabits the southeastern coastal plain, which stretches in an arc from southern Virginia to eastern Texas.

---

[51] Thomson 1998.

[52] Bean 1994b.

The same logic that applies to the woodpecker also applies to the bald eagle. Bean also added; "In short, they're really nothing more than a predictable response to the familiar perverse incentives that sometimes accompany regulatory programs, not just the endangered species program but others." Habitat destruction due to the ESA's perverse incentives has been documented by peer reviewed literature[53] as well as observations by experts on implementing the ESA.[54]

It is very likely the problem of the ESA's perverse incentives observed by Michael Bean also apply to the bald eagle. Indeed, as Jodi Millar, the lead person at the FWS in charge of the bald eagle from the 1990s until delisting in 2007, admitted, there have been instances in which people have destroyed eagle nests. Direct persecution is only one way in which landowners can get rid of their endangered species liabilities. Just as with the red-cockaded woodpecker and other endangered species, there is a wide array of strategies for making habitat inhospitable so that bald eagles don't take up residence in the first place or are forced off land soon after becoming established.

The bald eagle inhabits vast areas of habitat throughout large parts of the lower 48 states, but the species is concentrated in certain states and regions, most notably Florida, Minnesota, Wisconsin, Michigan, the Chesapeake Bay region, Oregon, Puget Sound in Washington, and, more recently, Maine and Louisiana. Some of these areas, especially the Chesapeake Bay region, much of Florida and Puget Sound, are more easily monitored by federal and state wildlife

---

[53] Lueck and Michael 2000; Brook et al., 2003; Zhang 2004.

[54] "While I have no hard evidence to prove it, I am convinced that more habitat for the black-capped vireo, and especially the golden-cheeked warbler, has been lost in those areas of Texas since the listing of these birds than would have been lost without the ESA at all"—Larry McKinney, Director of Resource Protection, Texas Parks and Wildlife Department (McKinney 1993, p.74.); "The incentives are wrong here. If I have a rare metal on my property, its value goes up. But if a rare bird occupies the land, its value disappears. We've got to turn if around to make the landowner want to have the bird on his property."—Sam Hamilton, then FWS administrator for Texas, referring particularly to the golden-cheeked warbler and black-capped vireo (Carpenter 1993); "The Service [FWS] believes that many landowners have felt threatened by the current regulations which could be viewed as a disincentive to enhance, restore, or maintain habitat in a condition chat is suitable for owl nesting, roosting, foraging, or dispersal. The disincentive stems from the landowners' fears that owls might establish residence on, or move through, their property and impede their ability to manage their timber resources. This disincentive has had the effect of increasing timber harvest of currently suitable owl habitat and younger forests on non-Federal lands which are not presently affected by the presence of an owl. With regard to younger forests in particular, this concern or fear has accelerated harvest rotations in an effort to avoid the regrowth of habitat that is useable by owls…Despite their normal practices, however, the small landowners of the Northwest have resorted to 'panic cutting' over their fear of Federal restrictions to protect owls. It is this category of landowner, in particular, who needs to be provided sufficient assurances of relief so they revert beck to their past practices of low impact forestry."—The U.S. Fish and Wildlife Services' on the northern spotted owl (U.S. Forest Service 1995)

authorities for a number of reasons, including relatively dense human populations, which potentially allows for two things; a comparatively large tax base that permits hiring more state wildlife agents per square mile than less populous areas, and more citizen "eyes on the ground" to report the presence of bald eagle nests to federal and state authorities. By contrast, in northern Minnesota, Wisconsin and Minnesota, where most of these states' bald eagle populations nest, as well as portions of Oregon, Washington, Louisiana and Maine, the human population tends to be less dense. Hence, there are likely fewer people to monitor existing or incipient eagle nests.

One result of these broad differences between more and less densely populated regions is there is less likelihood that landowners in less populous areas who rid their property of eagle habitat or nesting trees will be detected by authorities. In addition, and for all regions of the country, the phenomenon of engaging in legal activities to make land inhospitable to endangered species prior to species taking up residence likely applies to the bald eagle throughout its entire range. Rather than provide the type of habitat eagles favor for nesting and perching—tall, older trees (preferably with some dead branches up high) near a body of water—it is entirely possible that landowners preemptively cut such trees before they can be occupied by eagles. Indeed, cutting trees before they get too large and mature so as to avoid land being encumbered by the ESA is precisely what has occurred in the red-cockaded woodpecker's range.

On the whole, however, for all of these regions and states with bald eagles, it is important to keep in mind three factors that argue in favor of the ESA doing more harm than good. First, bald eagles and their nests are massive and conspicuous. By contrast, many species, such as the red-cockaded woodpecker are relatively small and inconspicuous. This means that landowners can quickly and easily identify when they have bald eagles around. Second, the bald eagle prefers rural habitat that, by definition, contains relatively few people. Even areas that are relatively more populated, such as Florida, Chesapeake Bay and Puget Sound, contain vast amounts of habitat that is seldom observed by the authorities or concerned citizens. Third, landowners, because they tend to know what is happening on their property, are likely the first to be aware of the presence of bald eagles on their land. The combination of these three factors means that even for relatively more populated regions the odds are stacked in landowners' favor when it comes to engaging in shoot, shovel, and shut-up or modifying habitat to make it uninhabitable to eagles. The net result is that for bald eagle nesting habitat, at least, the ESA may well have done more harm than good.

PRECAUTIONARY PRINCIPLE

Given the possibility the ESA's punitive regulations caused more harm than good to the bald eagle, ESA proponents should have opposed them. The reason for this is the precautionary principle, one of the underlying philosophical bases of the ESA. The precautionary principle is just a fancy term for the "just in case" maxim; the idea that even if the data is uncertain, erring on the side of caution is warranted because the costs of not doing so are potentially so high. The precautionary principle forms much of the philosophical basis for not only the ESA but many of the environmental laws advocated by the federal government and environmental pressure groups. The ESA, "is likely one of the earliest legislative expressions of what is now referred to as the 'precautionary principle,'" assert Jeff Curtis Western Conservation Director for Trout Unlimited, and counsel to the U.S. House of Representatives Subcommittee on Fisheries and Wildlife Conservation and the Environment of the House Merchant Marine and Fisheries Committee in the 1980s, and Bob Davison, Northwest Field Representative for the Wildlife Society, and Deputy Assistant Secretary for Fish, Wildlife and Parks from 1993-1996.[55]

But if the precautionary principle is truly a principle—i.e., something that serves as a consistent basis for conduct because it is recognized as being generally true—then it must be applied equally to costs and benefits. Another way of looking at this is that the precautionary principle is like a two-sided coin that has benefits on one side and costs on the other. In terms of the bald eagle under the ESA, the costs consist of harm to the eagle through punitive land-use control, while the benefits are conserving the eagle through these same land-use controls. Applying the precautionary principle to the bald eagle means that if there is a chance that the ESA's land-use regulations have caused harm, (which has been confirmed by the FWS's bald eagle coordinator) then, just to err on the side of caution, the conclusion must be reached that the regulations, indeed, have caused more harm than good. If those who invoke the precautionary principle as a rationale for why the ESA is important truly believe they are advocating a principle, then, for the sake of consistency, they must also apply the precautionary principle to the harm the ESA may be causing the bald eagle and other species. Otherwise, unwillingness to do so would provide a clear indication that the precautionary principle is really nothing more

[55] Curtis and Davison 2003, p.9.

than a ploy to justify using the ESA as a land-use control tool.

PRIVATE LANDOWNERS PROUD TO HARBOR EAGLES

Most landowners are proud to have wildlife on their land, especially charismatic species like the bald eagle. As the nation's symbol, many landowners would be delighted to have an eagle nesting on their property so long as the value of the property or the ability to use the property is not substantially diminished. "It's because the American people wanted the bald eagle to come back," that the species recovered, according to the FWS's Jodi Millar. "It wasn't OK any longer for development to disturb bald eagle nests. There are a lot of people who are thrilled to have bald eagles nesting and feeding near where they are viewing. They became very protective."[56]

Evidence of private landowners' affinity for bald eagles can be found in Washington State. "The contribution of many private landowners that have willingly retained nest, perch, and screening trees should not be underestimated. Many people appreciate having eagles on their property and have made sacrifices to accommodate them," according to the Washington Department of Fish and Wildlife.[57] "Many private landowners have developed lots so as to minimize impacts to eagles, and they value the presence of eagles and in some cases trees will be allowed to grow to large size after residences are built."[58] Doubtless, there are many, many other instances in which landowners have engaged in similar behavior.

Sadly, the ESA has done enormous damage to Americans' desire to have rare wildlife on their land. Landowners do not fear wildlife, they do, however, fear the federal government, their property being devalued, and the prospect of losing control of their land. Also, reliance on the ESA's punitive provisions stymies creative solutions to encourage private landowners to harbor endangered species, including bald eagles. Such solutions could range from a simple honorary award, complete with a signed certificate of appreciation from the Interior Secretary, to annual cash payments, or bounties, for producing bald eagles, to rental and lease agreements. There are a myriad such possibilities.

---

[56] Borenstein 1999.

[57] Stinson et al., 2001, p.40.

[58] Stinson et al., 2001, p.30.

Environmental Defense Fund claims to have created such an innovative approach in 1995. But the organization's Safe Harbors program is little more than window dressing because it does little to lessen the ESA's punitive provisions, with the exception of relatively wealthy landowners who can afford to sacrifice some of the property in order to avoid getting whacked by the ESA, or landowners who have already developed much of their land. Indeed, Safe Harbors, and other such "incentive" programs rely on the threat of the Act's draconian regulations to get people "willingly" to come to the negotiating table.

A far more effective and efficient approach would be first to remove the disincentives that are causing people to destroy species and habitat. There is a wide array of potential conservation measures to promote bald eagle conservation on private lands that have not been explored or undertaken systematically on a broad scale because of two factors. One, as mentioned, is reliance on the ESA's punitive provisions. Second, is a lack of commitment on the part of ESA supporters to advocate means other than penalties to achieve the goal of recovering the bald eagle and other species. It is not for lack of funding that ESA advocates have so failed; it is for lack of imagination, and for an unwillingness to let go of the Act's punitive regulations and embrace a more progressive vision of endangered species conservation.

WINTERING HABITAT

The use of the ESA to conserve wintering habitat in colder regions in all likelihood benefitted the bald eagle. Eagles in colder regions tend to concentrate in areas that are ice free and have an abundance of prey. Due to this, these wintering areas are easily identified and monitored. As such, landowner activities detrimental to eagles would tend to be fairly obvious. But landowners could still cut down trees in the spring and summer when eagles were not present. Even so, the case for ESA regulations benefiting specific areas where eagles concentrate in the winter is much stronger than for nesting habitat because during the nesting season bald eagles disperse and so are much more difficult to monitor.

FEDERAL LANDS

Federal lands have played a significant role in the conservation of the bald eagle, albeit of

less importance than private lands in large part because federal lands constitute a minority of habitat used by the eagle for nesting. There are, however, a number of aspects of federal lands that bear mentioning.

First, four national wildlife refuges were created specifically for the bald eagle; Mason Neck and James River in Virginia, Bear Valley in Oregon, and Karl Mundt in South Dakota. More refuges have been created for the eagle than any other species listed under the ESA, which is a reflection of the eagle's charisma and that the species likely ranges over more of the lower 48 than any other listed species.

Second, the FWS has compiled two lists of National Wildlife Refuges the agency claims are utilized by the bald eagle. One list contains 124 National Wildlife Refuges that are "inhabited" by bald eagles.[59] The other list contains 296 National Wildlife Refuges in the lower 48 states where the bald eagle is "known to occur."[60] Caution, however, is warranted about both of these lists. For starters, the discrepancy between the numbers of refuges on the lists raises doubt as to the accuracy of either list. Also, a cursory examination of both lists reveals that no distinction has been made for how significant a given refuge is for the eagle. For example, the list of 124 refuges contains Stone Lakes Refuge, which is twelve miles south of Sacramento, California, adjacent to Interstate 5, the major north-south highway running from Los Angeles to Sacramento and on to Seattle. Yet according to the bird list for the refuge, which is published by the FWS, the bald eagle has been "observed less than 10 times in the past 10 years," making the eagle one of only a handful of birds on the list be categorized as such because it is among the most infrequently observed.[61] At the other end of the spectrum are the four above-mentioned refuges created specifically for the bald eagle and other refuges, such as Blackwater National Wildlife Refuge, located on the eastern shore of Chesapeake Bay, which supports the largest nesting population of eagles on the east coast, other than areas in Florida, and a wintering population of more than 200 eagles.[62]

Third, the bald eagle seems to have been a factor in the creation and expansion of many

---

[59] U.S. Fish and Wildlife Service 1999l.

[60] U.S. Fish and Wildlife Service. ND. Bald Eagle. Threatened and Endangered Species System (TESS), report for the bald eagle.

[61] U.S. Fish and Wildlife Service. ND. *Stone Lakes National Wildlife Refuge Bird List*.

[62] U.S. Fish and Wildlife Service 2006c.

National Wildlife Refuges. While the eagle was not necessarily the only factor, as it was for the four refuges created specifically for it, the eagle has played roles, to varying degrees, in helping the FWS justify the creation of new refuges and expansion of existing refuges. It is not clear how many refuges this is the case for, or how significant a role the bald eagle played in each case.

Fourth, it is likely that the use of the ESA's land-use regulations on federal lands, through Section 7 of the Act, which requires federal agencies to insure that their activities do not jeopardize endangered species, has been beneficial to the bald eagle. For example, if the Army Corps of Engineers wants to dredge a waterway or construct flood control structures, it is required to check with the FWS to make sure the proposed activities do not adversely affect, or "take," endangered or threatened species. Protection of habitat for the bald eagle, through Section 7, has occurred many times and has been of benefit to the eagle.

INCREASING TOLERANCE TO HUMANS

An intriguing aspect of the issue of bald eagles and habitat conservation is that there is evidence eagles in some areas are relatively tolerant, and perhaps increasingly, to human activity. This calls into question the entire notion that the bald eagle is always highly intolerant of human activity, and, more particularly, the habitat protection measures implemented by the FWS during the eagle's tenure under the ESA. This issue still has a great deal of relevance because the FWS transferred much of the ESA's punitive land-use control provisions to the Bald and Golden Eagle Protection Act, and in order to implement these provisions the FWS will be relying on the habitat protection standards it developed under the ESA.

Prior to, at the time of, and during its tenure under the ESA, the bald eagle was almost invariably portrayed as a denizen of "wilderness" that was highly intolerant to human activity near nest sites. The main reason for this is that a bald eagle intolerant of human activity was thought to be a more effective means to curtail and influence land use decisions, such as where a house could be built or if trees could be cut. Intolerant eagles would mean fewer houses, less development, and more open space. On the other hand, eagles more tolerant of humans and human activity would seem to translate into more development and less open space. Therefore, the prospect of eagles being more tolerant of human activity than had previously been assumed

was disconcerting to ESA supporters who cherish the Act because of its ability to influence land use issues. Of course, ESA supporters did not take account of the fact that the perverse incentives created by the Act's habitat protection provision may well have been doing more harm than good by encouraging landowners to get rid of eagles and habitat.

Relative tolerance of bald eagles to human activity had been documented in three states that at the time of delisting in 2007 contained 28% of the eagle's population in the lower 48 states; Florida, the state with the highest number of nesting bald eagles (1,166 pairs), Minnesota, which had the second largest population (1,132 pairs), and Washington, with the fourth largest population (835 pairs).

Florida presents an especially intriguing case because not only did it have the largest bald eagle population, but it also had two factors that would seem to be harmful to eagles; the fourth largest human population (estimated to be 17,789,864 in 2005), and one of the highest annual rates of human population growth in the country (estimated at 11.3% from 2000-2005).[63]

The relative tolerance of Florida bald eagles to human activity had long been known to state and federal wildlife authorities, and the FWS acknowledged this, albeit implicitly, in 1984 with the publication of the recovery plan for the bald eagle in southeastern states. One part of the plan established management guidelines for eagles, including buffer zones in concentric circles around nest trees. The FWS recommended that the first, or primary, zone be established within a 1,500-foot radius from the nest "except in Florida where it should be 750 feet." Even though this was because Florida eagles were relatively tolerant of human activity, the FWS knew that this would undermine the agency's efforts to portray the eagle as intolerant of human activity. So the FWS did what it often does when confronted with information that contradicts agency orthodoxy; it came up with a fairly crude rationalization. "The smaller zone in the state of Florida is not necessarily because bald eagles are more tolerant than elsewhere, but because the other Southeastern States have comparatively few active nests. The loss of only one nest would have a significant and possibly devastating effect on an individual State's total bald eagle population."[64] Perhaps realizing the implications of its admission, albeit highly qualified, the FWS omitted any mention of Florida eagle's being tolerant of human activity when the agency

[63] The data on Florida's human population was obtained from: United States Census Bureau. ND.

[64] U.S. Fish and Wildlife Service 1984e, p.D3.

published an updated version of the bald eagle management guidelines three years later, in 1987.[65] Even so, the agency was unable to keep the truth from coming out. "The bald eagle is a lot more tolerant of human disturbance than we ever anticipated," stated Linda Finger, FWS endangered species biologist, in 1997.[66]

Due to apparent tolerance of some eagles to disturbance, biologists for the state of Florida studied nesting patterns and success rates for bald eagles in west-central part of the state from 1997-2001. The results, published in a peer reviewed journal, undermine the commonly held notion that bald eagles depend on "wilderness" for nesting and are very intolerant of human activity. The study examined 120 nest sites, 60 in rural habitat and 60 in suburban habitat, a type of habitat that could include housing developments, highways, industrial parks, golf courses, airports and recreation fields. Indeed, nine of the nests studied were on human-made structures; 6 on electrical poles, 2 on nesting towers erected for raptors, and 1 on a cell phone tower.

The results from the study are illuminating. "We detected no differences in nest-site occupancy, nest success, or number of young fledged between bald eagles occupying suburban or rural nest sites," state the study's authors.[67] The one main difference the study did find was rural and suburban eaglets had very similar survival rates until they began to disperse from their nests at around 100-150 days of age. Survival to one-year of age turned out to be 17-24% higher for rural eagles, but in subsequent years survival rates for both rural and suburban eagles was very similar, around 84-90%. The study's authors speculate that the difference in first year mortality may be due to fledgling suburban bald eagles being "more acclimated to dangerous anthropogenic landscape features than rural eagles" and as a result suburban eagles "did not initially regard these features with the same degree of caution once independent" as did their rural counterparts.[68] Even so, both rural and suburban bald eagle populations exhibited positive population growth rates; 8.3% for rural, and 3.5% for suburban.[69]

The implications of this study are very significant. "We expect this trend [use of human-

[65] U.S. Fish and Wildlife Service 1987e.

[66] Hamilton 1997.

[67] Millsap et al., 2004, p.1027.

[68] Millsap et al., 2004, p.1028.

[69] Millsap et al., 2004, p.1026.

made structures for nesting] to continue," state the authors.[70] Likely sensing the explosive nature of their findings, most notably that bald eagles can and do nest successfully in highly modified habitats and in close proximity to areas of intensive human activity, the authors are reluctant to explore in much depth the larger implications of the study. "We urge caution when applying our findings to the question of the need for protective measures to minimize human disturbance at bald eagle nest sites," the authors caution. "That some eagles can and do successfully coexist with intensive human activity does not mean that all eagles can."[71] Of course it does not. The salient point is that if some bald eagles are able to exploit successfully what had been regarded as marginal or even detrimental habitat, then this directly contradicts what the FWS, pressure groups and many researchers contended for years—that the bald eagle is a dweller of rural areas and that it requires large amounts of undeveloped land in order to be successful. "If bald eagles are capable of acclimating to nearby development, the species' status might be more secure than is generally thought, and relatively simple management actions may be undertaken around suburban nest sites to improve value and permanence," state the authors.[72]

In the Puget Sound region of Washington, which contains the vast majority of the state's eagle population, a peer reviewed study examined the nesting success of eagles closer and farther from development and human activity. As in Florida, the study found eagles relatively tolerant to humans. The Puget Sound study compared eagles nesting on land under management plans approved by the state, which mandate habitat restrictions, and nesting eagles without such plans. The study found that eagles nests with and without plans had practically identical rates of occupancy by pairs of eagles as well as productivity of young (the number of young produced annually by each occupied nest).[73]

This finding, however, appeared to be discomfiting to the study's authors. "The existing bald eagle literature recommends larger buffers and suggests results other than observed in this study," admitted the authors.[74] Yet the authors' three possible reason for this—nests with

---

[70] Millsap et al., 2004, p.1029.

[71] Millsap et al., 2004, p.1029.

[72] Millsap et al., 2004, p.1019.

[73] Schirato and Parson 2006.

[74] Schirato and Parson 2006.

management plans are not subject to the same amounts of development around them, the land around nests with such plans is more closely regulated than the land around nests without plans, and other factors, such as the availability of food and proximity to other eagle nests, may influence nest success—omitted another obvious possibility; eagles in Puget Sound, like those in Florida, are relatively tolerant of human activity.

In Minnesota, research by a graduate student and his advisor also found bald eagles to be relatively tolerant to certain human activities. "Eagles have proven to be more adaptable to different habitats and human presence levels than previously considered and we do not believe that habitat or the physical presence of humans per se is a limiting factor for the presence of bald eagles in the state of Minnesota," according to James Grier, professor of biology at North Dakota State University and one of the foremost experts on the bald eagle, and Jeremy Guinn, his graduate student. [75] Grier suggested a possible explanation for this; "A lot of the eagle nests now that are in close contact with human activity, the young birds that grow up in those nests [are] looking down and seeing all the human presence around them. As long as people aren't shooting at them or bothering them, as long as everybody is minding their own business, the eagles basically accept humans are part of the natural environment." [76] The tolerance of bald eagles in Minnesota to people has been noticed by others. Bald eagles "have proven us experts wrong," according to Carroll Henderson, a biologist with the Minnesota Department of Natural Resources. "We thought they'd only nest in big white pines on clear northern lakes with lots of fish. But we have them nesting all over the state."[77]

The implications of these three studies are extremely significant because they call into question the FWS's management regime for the bald eagle, which could be extremely punitive and was based on the notion that the eagle is very intolerant of human activity. More specifically, the three studies cast doubt on the validity of the FWS's habitat protection zones, especially around nests. Both the authors of the Florida and Puget Sound studies seem well aware that this is one of the obvious implications of their studies, which is why they try to downplay the significance and applicability of habitat protection zones to bald eagle

[75] Grier and Guinn 2003, p.33.

[76] Gunderson 2002.

[77] Myers 2007.

management. "Habitat guidelines for the protection of bald eagle nest sites in Florida prescribe protective buffer zones around Florida bald eagle nests of at least 227 m [745 feet] (U.S. Fish and Wildlife Service 1987)," according to the Florida study. "All suburban bald eagle nests in this study had human structures or intensive human activity at closer distances."[78] This strongly suggests that, contrary to the commonly held belief that led to a great deal of land-use control under the ESA, the bald eagle is not exclusively a "wilderness" denizen highly intolerant of human activity. "If bald eagles are capable of acclimating to nearby development, the species' status might be more secure than is generally thought, and relatively simple management actions may be undertaken around suburban nest sites to improve value and permanence," according to the authors of the Florida study.[79] And according to the study of Puget Sound, "The large buffer [zone] sizes that have been recommended [around nests] in the literature may not be appropriate for the Puget Sound Region."[80]

Even though all of this research provides powerful evidence that the FWS's habitat protection zones around nest trees were invalid, this appears to have made no difference to the agency. The FWS's has carried over, essentially intact, the ESA's land use control provisions to the Bald and Golden Eagle Protection Act, as well as the buffer zones established under the ESA. This will be discussed in the section below titled, "Delisting in Name Only."

These three studies from different areas of the country also suggest that a process of natural selection has been occurring over the past several decades. Those eagles that can tolerate human activity and development will be able to select suburban nest sites; those eagles that cannot, won't. One of the larger implications of these studies is that the bald eagle's carrying capacity (i.e., the ability of existing habitat to support a given number of eagles) might be substantially higher, due to the use of urbanized habitat, than what has traditionally been believed by the FWS, state wildlife agencies, university-based researchers, and pressure groups. In turn, this leads to the issue of land-use control, namely that a good deal of land-use control, at least in suburban areas, might well have been mistakenly applied in the case of the bald eagle. Seeing that the ESA's land-use provisions have been carried over virtually unchanged to the Bald and Golden Eagle Protection Act after the eagle was delisted from the ESA, it is very likely

[78] Millsap et al., 2004, p. 1028.

[79] Millsap et al., p. 1019.

[80] Schirato and Parson 2006, p.139.

the FWS and other regulatory agencies will continue to make this mistake in the future.

HABITAT CREATION AND CLIMATE CHANGE

Creation of habitat by humans, most notably reservoirs and other water impoundments, as well as climate change, has been beneficial to the eagle in various parts of the country. This is rarely, if ever, mentioned by ESA boosters, likely because it undermines their portrayal of the eagle as a "wilderness" denizen that depends on large tracts of land unaltered by humans.

HABITAT CREATION

Habitat for bald eagles has been created in various parts of the country. The most notable example in the arid southwest, Arizona specifically, which, with 47 pairs in 2003, contained almost the entire region's population.[81] Habitat has been created by dams and other water impoundments along Arizona rivers, primarily the Salt, Verde and Gila. Had this not occurred, the bald eagle population would almost certainly be significantly smaller than it is today. Additional information on the beneficial effects of dams on the bald eagle population of Arizona is in a subsequent section titled, "Delayed Delisting."

Water impoundments have also been beneficial in other regions and states as well. "There is a wide agreement that the construction of locks, dams, reservoirs and the creation of wildlife refuges have been beneficial to wintering bald eagles by increasing and concentrating fish and waterfowl, the major food source of these birds," stated Jon Swenson, biologist with the Montana Department of Fish, Wildlife & Parks. "Prey vulnerability has also been increased; fish are stunned or killed as they pass through hydroelectric turbines, gizzard shad (*Dorosoma cepedianum*) are killed by temperature fluctuations, many dead fish are often available at reservoirs at ice-out, and crippled waterfowl are important food items at wildlife refuges."[82]

Similar effects have been noticed elsewhere. "Large manmade reservoirs in South Carolina have provided 240,000 ha. (592,800 acres) of new inland eagle foraging habitat," according to the South Carolina Department of Natural Resources. "Concentrations of eagles

[81] Environmental Defense Fund 2004.

[82] Swenson 1983.

may be found below hydroelectric dams where they forage on injured fish. Impounded marsh [*sic*] managed for waterfowl is preferred foraging and nesting habitat."[83] Bald eagles in Washington have also similarly benefited. "Human-related changes have not all been negative for bald eagles, particularly in eastern Washington," states the Washington Department of Fish and Wildlife. "A variety of freshwater fish have been introduced to Washington waters and reservoirs created habitat for fish and concentration areas for wintering waterfowl."[84] The bald eagle population in Oklahoma has also received a boost from water development projects. "We believe that recent increases in the bald eagle nesting population in Oklahoma are due to increase in favorable habitat, namely the impoundment of rivers to create reservoirs; to the decrease in chlorinated hydrocarbon pesticides in the environment that occurred after legislation limiting their use in the United States was enacted; and to the reintroduction of the species by hacking from 1985-1990," assert Allan Jenkins and Steve Sherrod, Assistant Director and Director, respectively, of the Sutton Avian Research Center and the two people most responsible for the captive rearing and reintroduction of bald eagles to Oklahoma, North Carolina, Mississippi, Georgia and Alabama.[85] "Bald eagles reclaimed much of their former habitat in the East and expanded to reservoirs and river valleys in the arid West," states Jim Enderson, professor emeritus of biology at Colorado College, and one of the foremost raptor experts in the U.S.[86] This observation about bald eagles in semi-arid and arid ecosystems is logical because, after all, the bald eagle dwells in aquatic habitats.

Some may contend that water impoundments are symptomatic of the type of human development that, overall, has been detrimental to the bald eagle. While it is true that humans have had an overall negative impact on bald eagle populations and habitat, it necessary to be realistic about the prospects for bald eagle conservation. It is simply not possible to turn back to clock to some idealized pre-industrial era when most of the U.S. was undeveloped and bald eagle populations were significantly higher. Instead, what is necessary is to deal with America as it

[83] Murhpy and Hope. ND.

[84] Stinson et al., 2001, p.28.

[85] Jenkins and Sherrod 2005.

[86] Enderson 2005, p.206.

exists today, and part of this entails looking realistically and opportunistically at prospects for wildlife conservation, including the bald eagle.

CLIMATE CHANGE

Global climate trends, specifically the warming that has taken place over the past several decades, seems to have been beneficial to wintering bald eagles by causing open water to be available in more areas and for longer time periods. This has allowed bald eagles to fish in more ice-free areas for longer periods of time. In turn, this means that wintering bald eagles are more likely to be healthy, less likely to fall victim to the vagaries of malnutrition, including disease and death, and more likely to enter the spring breeding season in better condition and, hence, more likely to raise young successfully.

From 1986-2000, data from the annual, nationwide mid-winter bald eagle survey revealed that more eagles were seen in the northern and eastern regions of the U.S. than in the southern and western regions. Authors of the peer reviewed study that analyzed the surveys offer several explanations for why this is so, one of which is related to climate. "[I]ncreasing warmer winters…may have resulted in more eagles spending the winter farther north and few migrating south. New dams, spillways, and wastewater facilities that keep water from freezing in northern regions also may be enticing an increasing number of eagles to winter farther north and in greater densities at higher latitudes than in the past."[87]

DDT BAN vs. HABITAT PROTECTION

Clearly, the DDT ban in 1972 was far more significant than ESA related habitat protection to the conservation of the bald eagle. Had not DDT been banned, then much of the habitat protection under the ESA would have been for naught, or at least of limited effectiveness. If the DDT ban did not occur, then the bald eagle's population would be nowhere near as large as it is today in the lower 48 states, and the eagle would likely be extirpated from much of the lower 48. All conservation efforts, including habitat conservation, depended on the DDT ban occurring first. As the years passed following the ban, and the amounts of DDT in the environment

[87] Steenhof et al., 2002, p.30.

gradually lessened, habitat conservation increasingly grew to be the most important factor in the eagle's conservation. However, as discussed, it is entirely possible that habitat protection under the ESA, which has relied primarily on the Act's punitive land-use control provisions, has done more harm than good. Given the ambiguous nature of ESA habitat protection, and the unambiguous status of the DDT ban, it is clear that the ban has played a far more significant role in the eagle's conservation.

NO PROTECTION NORTH OF 40º NORTH LATITUDE UNTIL 1978

For more than four years, from the time of the ESA's passage at the end of December 1973 until the middle of February 1978, all bald eagles north of 40º N. latitude, a region that at the time contained approximately 70% of the entire bald eagle population in the lower 48 states, were not listed under the Act and therefore not afforded the supposed benefits of its protections. The FWS and pressure groups either fail to mention that this occurred or if they do mention it, they almost invariably do not reveal the fact that the great majority of bald eagles listed under the ESA did not benefit from the Act's protections for more the four most critical years of the their tenure under the law. The FWS and one pressure group have even tried to obscure the fact that these "northern" eagles were not listed for four years because this seriously undermined the case for the ESA's importance conserving the eagle. The four years that 70% of the eagle's population in the lower 48 was not listed were the most critical during the bald eagle's time under the ESA because while DDT had been banned in 1972, the population was still vulnerable. The population was small and just starting to recovery from the effects of the DDT caused population crash. Despite not having the "benefit" of the ESA's protections from 1973-1978, the eagle population north of 40º N. latitude thrived and increased markedly.

WHERE IS 40º N LATITUDE?

Prior to looking into these issues, it is first necessary to get a sense of the area in which the eagle was not listed until 1978. The region of the lower 48 states north of 40º N is enormous. From east to west it stretches from Philadelphia, Pennsylvania to a point in northern California

that is roughly midway between San Francisco and the Oregon border.[88]

THE FWS'S RATIONALE FOR NOT LISTING

According to the FWS, it decided to list bald eagles north of 40º N latitude in 1978 because, when the agency first listed the bald eagle in 1967 under legislation preceding the ESA, only one of the two recognized subspecies at the time, *Haliaeetus leucocephalus leucocephalus*, the southern bald eagle, was listed by the agency while the other subspecies, *Haliaeetus leucocephalus alascanus*, the northern bald eagle, was not listed.[89] "When the southern bald eagle was listed as Endangered in 1967, the northern subspecies was not listed, primarily because the Alaskan population of that subspecies, which consisted of thousands of pairs, was not considered Endangered," according to the FWS. "At that time, it was not legally possible to list only a portion of a subspecies. Additionally, in 1967 there was no Threatened category."[90]

The line demarcating the boundary between these two subspecies was 40º N. latitude. "This line was arbitrarily selected for purposes of convenience to separate the two subspecies of bald eagles," admits the FWS.[91] The reason for the perception that there were two distinct subspecies was based on morphological research which showed that northern eagles tend to be larger and southern eagles smaller. As FWS admitted, there was "no clear breaking point" between the two subspecies.[92] To make matters more complicated, "there is considerable movement of eagles of both subspecies into each other's breeding range during non-breeding

[88] From East to West, 40º N. Latitude passes through or near the following points: Philadelphia, Pennsylvania; Columbus, Ohio; some 25 miles north of Springfield, Illinois; the entire border between Kansas and Nebraska; Boulder, Colorado; 30 miles south of Provo, Utah; 60 miles north of REno Nevada; and then exiting the continental U.S. at a point parallel to roughly 80 miles south of Redding, California, or about midway between Sacramento and the Oregon border. Included in this region are nineteen entire states; Michigan, Wisconsin, Minnesota, Washington, Oregon, Idaho, Montana, Maine, Wyoming, North Dakota, South Dakota, Nebraska, Iowa, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, and Vermont. Portions of other states also fall north of 40º, and the approximate portions of these states are; 66% of New Jersey, 80% of Pennsylvania; 60% of Ohio, 40% of Indiana, 50% of Illinois, 15% of Missouri, 20% of Colorado, 30% of Utah, 35% of Nevada, and 15% of California. Moreover, a number of these states were strongholds for the eagle when it reached its population nadir, most notably Wisconsin, Minnesota and Michigan, followed in importance by Washington and Oregon. The reason for this is that these states had, and continue to have, high quality habitat, and were less affected by DDT than states further to the south.

[89] U.S. Fish and Wildlife Service 2004b.

[90] U.S. Fish and Wildlife Service 1978a, p.6230.

[91] U.S. Fish and Wildlife Service 1978a, p.6230.

[92] U.S. Fish and Wildlife Service 1978a, p.6231.

periods," according to the FWS. "Southern bald eagles may wander northward as far as Canada during the late summer," in a behavior knows as post-breeding dispersal. "Northern bald eagles migrate southward in large numbers for the winter."[93]

FWS'S PHONY RATIONALE

Two aspects of the FWS's rationale are notable: first, that the line demarcating the boundary between the two subspecies of bald eagle, 40º North Latitude, was "arbitrarily selected"; and, second, that the 1967 precursor to the 1973 ESA prevented listing eagles north of 40º N. latitude. The first shows that the process was inherently subjective.

The second reason is a canard. Congress passed the first precursor legislation to the ESA in 1966, and the FWS published the first list of endangered species in 1967, and it contained the so-called southern bald eagle.[94] The 1966 law only allowed for species or sub-species to be listed, not groups or populations. It was not until the ESA's passage in 1973 that the FWS was authorized to list, in addition to species, "any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature."[95] Clearly, under the provision for listing "any other group" the FWS could have listed those eagles north of 40º in the lower 48 states, but not eagles in Alaska, under the ESA. The definition of "any other group" was sufficiently vague that the FWS easily could have justified listing those eagles in the lower 48 north of 40º. Yet for reasons that are unclear the agency chose not to do so.

Some may point out that the reason the FWS did not list bald eagles in the lower 48 north of 40º is that it was not until 1978, when Congress amended the ESA to allow the listing of Distinct Population Segments, that the agency was allowed to do so. This, however, would be incorrect, as the language of the Distinct Population Segments reveals. The amended ESA defined species to include, in addition to full species, "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which

---

[93] U.S. Fish and Wildlife Service 1978a, p.6231.

[94] U.S. Department of the Interior 1967.

[95] Endangered Species Act, 1973, sec.3(11).

interbreeds when mature."[96] When the 1978 definition of species is compared to the original 1973 definition of species, it is clear that they are not substantially different, save for the elimination of plants from the 1978 definition. Just as there was nothing in the 1973 definition of species that prevented the FWS from listing bald eagles in the lower 48 north of 40º under the ESA after the Act's passage, there was nothing in the 1978 revised definition of species that suddenly permitted the FWS to list in the lower 48 north of 40º under the ESA.

Additionally, if, after the ESA's passage, the FWS was unsure whether it could legally list bald eagles in the lower north of 40º, the agency could have done one of two things. First, the FWS could have interpreted the definition of species, and had the Interior Department's Solicitor issue a formal opinion, in such a way as to permit the listing of these eagles. The ESA was such a new law, and the definition of species so broad, that the FWS and Interior Department had a great deal of leeway to interpret the law. Furthermore, given the bald eagle's iconic status as the national bird and the most prominent endangered species, there likely would have been very little if any objection from Congress, interest groups and various state and federal government agencies if the FWS and Interior listed bald eagles in the lower 48 north of 40º upon the ESA's passage in 1973. Second, even if there were objections after the ESA's passage to listing bald eagles in the lower 48 north of 40º—especially if Interior's Solicitor issued an opinion against listing—these objections could have been easily overridden by Congress amending the Act in 1974. This is entirely plausible because of the bald eagle's prominence. If the FWS wanted to list bald eagles in the lower 48 north of 40º, the agency easily could have enlisted the help of its friends in environmental pressure groups to mount a public relations campaign to "save" the bald eagle and to lobby Congress to amend the ESA quickly.

It is also not clear why in 1978, when the FWS finally got around to listing bald eagles in the lower 48 north of 40º, the agency would reference the irrelevant 1967 law. Perhaps it is because the FWS knew its failure to list eagles in the lower 48 states north of 40º seriously undermined its portrayal of these eagles as on the brink of extinction—despite that the correct term was extirpation because the massive and healthy bald eagle population in British Columbian, Canada and Alaska meant the species was in no danger of extinction—and therefore in need of the ESA's protection. After all, if the bald eagle's status in the lower 48 states was

[96] Endangered Species Act of 1978, sec. 3(16).

really so dire in 1973 then the FWS would have listed all bald eagles in the lower 48 immediately upon the ESA's passage. But if at the time of the ESA's passage eagles north of 40º were secure and even thriving, then perhaps the FWS chose not to list them because the agency knew they did not need the Act's help. Even if this was not the case after the ESA's passage—and the FWS somehow forgot to list 70% of the population of the Act's most prominent species that had been used to sell the Act to Congress, the President, and the public—then this still leaves open the question how these "northern" bald eagles that were on the brink of being extirpated, according to the FWS, survived without the benefit of being listed under the ESA.

If the FWS had been honest about its failure to list eagles north of 40º under the ESA—that these eagles had a healthy and growing population without the purported benefit of the Act—then this could open a can of worms about not only the necessity of the law for the eagle's conservation but a whole host of larger issues, such as the veracity of information the FWS and environmental pressure groups used to sell the Congress, President and American people on the dire necessity for the ESA. Indeed, the bald eagle, probably more than any other single species, was the foremost "poster species" used by the Department of Interior, pressure groups, and early Congressional backers to push for passage of the ESA.

The most remarkable aspect of the eagle not being listed north of 40º until 1978 is that around 70% of all eagles in the lower 48 states (i.e., those eagles listed under the ESA) lived north of 40º during this time period.[97] In other words, almost three-quarters of the population of

[97] The figure of 70% was arrived upon using estimates prior to and after 1978 because no nationwide data exists for 1978. In 1974, according to the FWS, 70% of the bald eagle pairs in the lower 48 states were found north of 40º, with of course the other 30% south of 40º (U.S. Fish and Wildlife Service 1978a, p.6231). The proportion of eagles in 1977 was likely about the same. 1977 is the year used instead of 1978 because counts of pairs took place, and still take place, during the summer so data from 1977 was the last available prior to when all eagles in the lower 48 were listed in February 1978. However, because no nationwide data is available for 1977, it is necessary to use data from 1981 as the point of comparison because that is the first year following 1974 in which a count of the entire lower 48 was conducted. In 1981, of the 1,188 pairs in the lower 48 states approximately 75% were north of 40º (This number was compiled from several different sources: U.S. Fish and Wildlife Service 1986b, pp.2-3; U.S. Fish and Wildlife Service 1983h, p.20; Isaacs and Anthony 2003; In addition, in 1981 all bald eagle pairs in California were north of 40º North Latitude, according to the Santa Cruz Predatory Bird Research Group (Santa Cruz Predatory Bird Research Group. ND. Bald Eagles). While admittedly imprecise, it is a fair assumption that the percentage of the population in the lower 48 north and south of 40º remained roughly the same from 1977-1981, especially because this percentage did not change much between 1974 and 1981. Therefore, the data from 1981 should provide an approximation of the numbers of bald eagle pairs extant in 1977.

The accuracy of this method for estimating the proportions of the 1977 population is also buttressed by the fact that the percentage of the population north of 40º has remained fairly consistent, albeit declining gradually, throughout the eagle's tenure under the ESA. In 1990, it was at least 62% and in 2000 it was at least 60% (U.S. Fish and Wildlife Service 2000e). As habitat south of 40º has gradually become more occupied, due primary to the fact that DDT use was more widespread in the southern

a species the FWS and environmental pressure groups claimed was on the brink of extinction and in dire need of the ESA's protection—and was one of the main reasons the Act was passed in 1973—were apparently not in need of the Act's protection for the four most critical years of its tenure, or lack thereof, under the ESA.

It is mind boggling that the FWS twiddled its thumbs for more than four years by failing to list 70% of the bald eagle's supposedly imperiled population until 1978. Furthermore, the FWS did not even propose to change the eagle's status until July, 1976, two-and-a-half years after the ESA's passage. The FWS then took another year-and-a-half to finalize the proposal. The FWS's casual pace is all the more astounding because, according to the agency and pressure groups, during this time period the eagle was on the brink of extinction, or at least extirpation in the lower 48 states. If this was the case, then this failure to list eagles north of 40º should not have occurred in the first place, and it certainly should not have taken the FWS a year-and-a-half to finalize the eagle's status. Had the FWS wanted to, it would easily have rammed through the final regulation instead of waiting a year-and-a-half.

It is important to keep in mind that the eagle's status was likely at or near its most tenuous in the early 1970s. But with each successive year during this time period, and especially as levels of DDT declined following the pesticide's 1972 ban, the bald eagle's population gradually increased and became progressively more secure. Yet during the critical period just after the DDT ban—in which the eagle's population was at its most vulnerable, and therefore in the view of the FWS and pressure groups most in need of the ESA's protection—the FWS did not list the eagle under the Act. Unless, of course, the FWS and pressure groups knew that bald eagles north of 40º North Latitude did not truly merit the ESA's protection because the population in this region was relatively secure and increasing.

An indication that this was likely the case is that in the mid-1970s, when the bald eagle in the lower 48 was supposedly teetering on the brink of extirpation, or even extinction if one believes claims made by some pressure groups, eggs and eaglets were transferred from states with healthy populations, such as Minnesota and Wisconsin, to states, such as New York and Maine, that were seeking to reestablish eagles after the DDT-induced population crash (for more

---

portions of the U.S., and habitat north of 40º was approaching carrying capacity, the percentage of eagles in the north gradually declined while the percentage south of 40º increased.

information on this see the section below titled "Reintroductions"). The FWS's approval was necessary, under the ESA, Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act, for these eggs and eaglets to be handled and transported. Had the FWS truly believed the eagle's status in the lower 48 was so dire, then the agency would not have given its approval. But the FWS did give its approval, which strongly suggests the agency knew full well that bald eagle populations in a number of states were very healthy and could easily sustain the loss of eggs and eaglets.

Some might try to claim that the FWS was precluded from listing eagles north of 40º by of a combination of taxonomic and regulatory issues. The taxonomic issue is that the eagles north of 40º were considered a separate subspecies. The regulatory issue is that it was not until Congress amended the ESA in 1978 that the FWS was able to list "distinct population segments" of species and subspecies, which meant the agency could list a species or subspecies based on geography (i.e., geographically isolated populations) as well as taxonomy. But, as explained, the language of ESA as it was passed in 1973 permitted "any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature" to be listed under the Act. Had the FWS wanted to, it could have defined bald eagles north of 40º, but south of Alaska and the Canadian border, as just such a "group" and listed it under the ESA.

The only other possible explanation for why listing north of 40º did not occur until 1978 is the type of procrastination and inertia that oftentimes hamstrings large bureaucracies such as the FWS. This, however, is an inadequate explanation because, as mentioned, it is virtually inconceivable that the FWS would allow negligence and incompetence to hinder the conservation of the single most important and well-known species listed under the ESA.

The fact that 70% of the bald eagle's population was not listed until 1978 raises three issues. First, is the importance, or lack thereof, of the ESA in the conservation of most of the bald eagles in the lower 48 states, especially in the critical years just after the banning of DDT when the population at or near it lowest, and hence most vulnerable, point. Not surprisingly, ESA proponents have neglected to make much, if any, mention of this. In response to this embarrassing fact, some from the FWS or environmental pressure groups might point out that while the eagles north of 40º N. latitude nested there, a good number of them migrated south of 40º during the winter in search of open, unfrozen waters in which they could hunt for fish, their preferred prey. Therefore, the reasoning might go, the ESA played a crucially important role

conserving habitat used by these "northern" eagles during the winter. Yet eagles did, and still do, travel back-and-forth across 40º. After all, eagles, like all wildlife do not recognize the grid lines of latitude and longitude. "[T]here is considerable movement of eagles of both subspecies into each other's breeding range during nonbreeding periods," stated the FWS in 1978. "Southern bald eagles may wander northward as far as Canada during the late summer. Northern bald eagles migrate southward in large numbers for the winter."[98] This continuous back-and-forth of eagles across the line of 40º means that it is simply not possible to argue that habitat south of 40º played any more significant role for wintering "northern" eagles than did habitat north of 40º play for "southern" eagles.

Second, nesting habitat seems generally to have been the focus of the FWS when wielding the ESA's punitive provisions that have restricted land and resource use for the bald eagle. A reason for this is because eagles tend to be much more sensitive to human disturbance when they are nesting than when they are at winter habitat. The approximately 70% of the eagle population north of 40º in the early-to-mid-1970s were pairs, which means eagles on nesting territory. So during the key time of the year, the late winter, spring and summer months when breeding and rearing of young occurs, approximately 70% of the population did not receive any protection of their nests from the ESA until 1978.

Third, is the veracity of claims by ESA boosters about the Act's critical importance in saving the eagle from possible extirpation in the lower 48 states. After all, if the ESA was not necessary during the most critical years of the bald eagle's tenure under the Act then this significantly diminishes the contention by the ESA's proponents that the eagle is a success story of the Act. By having waited over four years after the ESA's passage to extend protection to 70% of the bald eagles in the lower 48 states, the FWS undermined the Act's role in the conservation of these eagles.

EFFORTS TO CONCEAL THE FAILURE TO LIST NORTH OF 40º

In addition to the FWS, some pressure groups have offered spurious explanations for why eagles north of 40º were not listed until 1978. "Following 1973 and 1974 surveys that showed

[98] U.S. Fish and Wildlife Service 1978a, p.6231.

that populations continued to decline, FWS changed the eagle's status in 1978 to endangered in all continental states except Michigan, Minnesota, Oregon and Washington, where eagles were less rare and remained listed as threatened," claims the Environmental Defense Fund.[99]

There are two problems with this explanation. First, it falsely implies eagles in Michigan, Minnesota, Oregon and Washington were listed under the ESA prior to 1978. Second, this explanation is erroneous, which can be shown through some of the very population data cited by Environmental Defense.

STATE	**PAIRS OF EAGLES**		**PERCENTAGE CHANGE**
	1973	**1974**	
Florida[100]	88	157	78.4%
Minnesota[101]	115	127	10.4%
Wisconsin[102]	108	107	-0.9%
Michigan[103]	82	82	0.0%
Oregon[104]	31	31	0.0%
Subtotal	**425**	**504**	**18.6%**
Washington*[105]	NA	117**	NA
TOTAL	NA	**621*** **	NA

*Washington was not included in the subtotal because no statewide data were available for 1973
** This data is incomplete and from 1975 because no data was available for 1974
***This total is an approximation due to data estimated data for Washington

In 1974, the approximately 621 bald eagle pairs in these six states comprised 79% of all eagles listed under the ESA (no nationwide data are available for 1973 so it is not possible to determine for that year what percentage of the total population was from these six states). As these data clearly show, the vast majority of the bald eagle's population was increasing. In fact, for the overall population to have declined between 1973 and 1974, as Environmental Defense Fund claims, the remaining 21% of the population would have had to experience a population

[99] Environmental Defense Fund 2004b.

[100] Nesbitt 2003.

[101] Minnesota Department of Natural Resources, ND. *Occupied Bald Eagle Breeding Territories*.

[102] Wisconsin Department of Natural Resources. ND. *Wisconsin Eagle Nest Survey*.

[103] Herbert, personal communication.

[104] Isaacs and Anthony 2003.

[105] Stinson et al., 2001, p.20.

growth rate of around *negative* 70%. Not only is this not supported by the data, but it is so implausible it borders on the impossible for two reasons; the rest of the population would have had to have a massive and sudden population decline, and all the available population data shows the bald eagle's population increasing in the years and decades following the 1972 DDT ban. In fact, all available data show that the bald eagle's population *increased* every year survey data for some or all of the lower 48 states have been compiled. Around the time the FWS changed the eagle's status in 1978, press releases from the FWS and Department of Interior made no mention whatsoever of a population decline as the reason why the status change occurred.[106] The bald eagle was such a high profile species that if it suffered a massive population decline then there would have been some mention of this from the federal government, as well as in the scientific literature. Of course, there is no such mention.

Either the Environmental Defense Fund's explanation of the reason for the failure to list the eagles north of 40º until 1978 is based on faulty data, or it is a smokescreen designed to obscure the fact that the majority of the bald eagles in the lower 48 states increased despite not being listed under the ESA for four years. Either way, it is totally without merit.

Another tactic by ESA supporters has been to exaggerate the importance of the 1978 reclassification. "The most sweeping protections took effect in 1978, when, under the Endangered Species Act of 1973, the bald eagle was listed as endangered in 43 of the lower 48 states and as threatened in the rest," stated the National Geographic Society. "The estimated 50,000 bald eagles in Alaska are not at risk; therefore, they do not receive protection under the act. Enforcement of the Endangered Species Act; cooperation among wildlife agencies and conservation organizations on captive-breeding programs and reintroductions; and citizen support led to a fourfold increase in lower-48 nesting populations between the mid-1970s and mid-1990s.[107] Note how National Geographic made no mention of the overriding importance of the DDT ban, equated the ESA with "most sweeping," and failed to mention that between the time of the ESA's passage in 1973 and the eagle's listing in 1978, some 70% of the bald eagle's population in the lower 48 states did not received the "benefit" of the ESA's protections and yet still increased substantially.

---

[106] U.S. Fish and Wildlife Service 1976f.

[107] Winkler 2002.

CONCLUSIONS ON FAILURE TO LIST NORTH OF 40º

Efforts to conceal or ignore the reality behind the 1978 listing cannot get around one clear and indisputable fact: for over four years, from the time of the ESA's passage in December 1973 until February 1978, the years during which the bald eagle's population was at its most vulnerable while listed under the Act, approximately 70% of the bald eagle population in the lower 48 states increased, and, most significantly, did not receive protection from the ESA. This fact seriously undermines claims that the ESA was necessary for the bald eagle's survival and that the eagle is a success story of the Act.

REINTRODUCTIONS

The reintroduction of bald eagles to areas from which they had been extirpated provided a boost to eagle populations in a number of states. However, the painstaking work of reintroducing bald eagles was almost totally due to states and private organizations, not the FWS or other federal agencies. In the mid-1970s, states with depleted eagle populations began experimenting with augmenting their populations with eagles from states with robust populations.

EGG TRANSPLANTS

Reintroduction efforts got rolling in 1974 when Maine, a state that had experienced a massive decline in its bald eagle population due in large part to DDT, swapped two eggs from an active nest in the wild with two eggs from Minnesota, a state where DDT was never much of a problem. The intent was to have the pair of eagles in Maine incubate the "clean" (i.e., untainted by DDT) eggs from Minnesota and hopefully raise the resulting chicks.[108] Between 1974 and 1978, a total of nineteen eggs were transplanted, thirteen from nests of wild eagles in Minnesota and Wisconsin, and six eggs from captive eagles at the FWS's Patuxent Wildlife Research Center. Eggs transplants, however, proved to be fairly unsuccessful and so were discontinued

[108] U.S. Fish and Wildlife Service 1974b.

after 1978.[109]

FOSTERING

Another method of reintroducing eagles was fostering, or placing young eaglets with a pair of adult eagles that either lost their eggs and young, were unsuccessful in breeding, or for "salvaging" eaglets that had incompetent parents or had suffered a catastrophe such as a nest being blown down in a storm. From 1975-1987, six states in the northeastern U.S. fostered fifty-two eaglets.[110]

HACKING

Large scale reintroduction efforts used the technique known as hacking, a process by which nestlings were placed in enclosures in the wild. Enclosure attendants would provide food but do so without the birds observing this so that the immature birds would not imprint on humans eventually learn to hunt on their own. After a few weeks, the enclosure would be opened and gradually food would be cut back until the young birds could hunt independently. Hacking got under way with the reintroduction of bald eagles to much of New York. Initially, the Peregrine Fund led the way. The Peregrine Fund was a private, non-profit organization founded in 1970 to restore the peregrine falcon to areas of the lower 48 states from which it had been extirpated. One of the groundbreaking conservation techniques perfected by the Fund was to release young birds into the wild by hacking them. Perfecting hacking was a painstaking and labor intensive process that took several years, but once it proved successful for falcon, the Peregrine Fund was able to adapt the technique for bald eagles.

In 1976, the Peregrine Fund collected two eaglets from Wisconsin for release at the Montezuma National Wildlife Refuge in upstate New York. The Fund was able to collect the eaglets from Wisconsin because the state had a large and healthy population.[111] The Fund was also able to collect the eaglets without the much of the federal red tape that hindered the

[109] Nye 2010.

[110] Nye 2010.

[111] Peregrine Fund. 2003.

American peregrine falcon program because bald eagles in Wisconsin would not receive the so-called benefit of the ESA's protections until 1978. Both eagles translocated from Wisconsin to New York fledged in 1976. The Peregrine Fund was again involved the following year when five eagles were hacked at Montezuma. The pilot hacking program proven very successful because of the seven eagles released, three eventually were part of breeding pairs and another was likely still alive by 1981. "The rate at which hacked eagles have become established as breeders is the wild is well-nigh unbelievable," stated Tom Cade, founder of the Peregrine Fund, one of the world's leading raptor experts and someone not given to exaggeration.[112]

Following the early success in New York, other states followed suit (Alabama, Arkansas, California, Georgia, Indiana, Massachusetts, Mississippi, Missouri, New Jersey, North Carolina, Oklahoma, Pennsylvania, Tennessee, and Vermont). Around 80% of the all eagles released were from wild nests, with the vast majority coming from Alaska.[113] Of the other 20% of released eagles, they "have come mostly from wild eggs collected in Florida and hatched in captivity at the Sutton Avian Research Center in Oklahoma," according to Pete Nye, long time bald eagle coordinator for the New York Department of Environmental Conservation.[114]

Not only did hacking eagles benefit the bald eagle but it served to inspire hacking projects for other species of eagles in other parts of the world. "The reintroduction of Bald Eagles in New York was expanded and continued as it was in many other states and internationally with other eagle species by other private and government organizations," noted Bill Burnham, President of the Peregrine Fund.[115]

REINTRODUCTION TOTALS

As of 2006, a total of approximately 1,383 eagles and eggs had been released or transferred to the wild, the vast majority of which were eagles released through hacking. Of this total, almost all eaglets and eggs were from Alaska, Minnesota, Wisconsin, Florida, a few other

[112] Cade 1983.

[113] Nye 1990.

[114] Nye 1990.

[115] Peregrine Fund 2000.

states with healthy populations, and Canada. A total of 124 eagles came from the captive breeding program at the FWS's Patuxent Wildlife Research Center. And a few more eagles were bred by zoos.[116] For the sake of a conservative estimate, let's assume that this total was 150, the known 124 birds from Patuxent and 26 birds from zoos, although this latter number is likely high. Even so, these birds represent only 10.8% of the eagles or eggs released to the wild by 2006, 9.0% of which have been from Patuxent. Even though the FWS and Interior Department have made a big deal about the Patuxent program, both at the time it was producing eagles and up to the present day, it is clear the program was relatively insignificant.

Funding for reintroduction efforts seems to have come primarily from states and private organizations. For example, the Sutton Avian Research in Oklahoma, which was responsible for releasing 275 eagles in Oklahoma, Mississippi, Alabama, Georgia and North Carolina, raised most of the funding itself for these releases. Contributions to Sutton by the FWS consisted primarily of in-kind donations of items such as living quarters and working space for people manning hack sites, food for eagles, as well as locations to conduct hacking.[117]

EXAGGERATED ROLE OF FWS'S CAPTIVE BREEDING PROGRAM

Despite the very small role played by eagles from Patuxent, the FWS and some pressure groups have exaggerated the role of the Patuxent eagles. "Gradually, the Fish and Wildlife Service assembled the largest colony of breeding bald eagles in captivity at its Patuxent Wildlife Research Center near Laurel, Maryland, in a major effort to return healthy eagles to the wild…In all, 124 bald eagles were hatched at Patuxent," the FWS states. "These captive-hatched bald eagles were an important source for restocking wild populations in certain areas of the country and helped to reestablish a broader distribution."[118] In reality, the FWS captive breeding effort at Patuxent was a massive waste of money because bald eagle chicks and eggs were readily available from states with healthy populations in Alaska, British Columbia, Florida, Minnesota, Wisconsin, Oregon, Washington and Michigan. These wild chicks and eggs were much cheaper

[116] Nye 1990.

[117] Jenkins 2007.

[118] U.S. Fish and Wildlife Service 2006h.

to obtain than the captive-produced chicks and eggs from Patuxent.

Most of the ESA's prominent supporters make similarly misleading claims about the importance of the FWS's captive breeding efforts. "Under the Endangered Species Act, the U.S. Fish and Wildlife Service (FWS) initiated a captive breeding program that produced birds for release into the wild," state the Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Endangered Species Coalition, Natural Resources Defense Council, National Wildlife Federation, and U.S. PIRG.[119] By omitting any mention of other efforts to restore the eagle, and, more importantly, that such efforts dwarfed the FWS's in terms of significance, these groups give the misleading impression that FWS captive breeding efforts provided the eagle with a considerable boost.

There are several reasons why the FWS might have established the bald eagle captive breeding program when it was not necessary to do so. First, the FWS's effort to have a captive breeding population occurred around the same time the agency was also trying to establish a captive breeding population of peregrine falcons for reintroduction. The peregrine effort was a massive failure because the FWS simply did not have the expertise to get peregrines to breed successfully in captivity. It was all the more a failure because private conservationists, led by Tom Cade who established the Peregrine Fund in 1970, had already figured out how to breed large numbers of peregrines in captivity, and this allowed nearly 7,000 captive-bred peregrines to be released to the wild by 1999. While the FWS was more successful with eagles, it was utterly unnecessary, as plenty of eagles were available, at fraction of the cost—because captive breeding of eagle, or any wildlife for that matter, is very expensive—from the wild.

Second, the agency had gone to enormous lengths to portray the eagle to the public, as well as members of Congress and others in the federal government, as on the verge of extirpation in the lower 48 states, and the ESA was needed to avert this impending disaster. But if states releasing eagles were able to get ready supplies of young birds from other states with large and healthy populations where the eagle was supposed to be teetering on the brink of extirpation—such as Wisconsin, Minnesota and Florida—then this would undercut the FWS's portrayal of the eagle. So it seems that the waste-of-money captive breeding program at Patuxent was largely about the FWS's effort to save face, from the peregrine debacle as well as the misportrayal of the

[119] American Rivers et al., 2003e.

eagle in the lower 48 states as on the verge of extirpation and therefore in need of drastic measures to save it, most notably the ESA.

Third, breeding bald eagles was a vanity project for the FWS. The FWS needed to show it was doing something tangible for the bald eagle. Conservation efforts such as monitoring pesticide levels and keeping people away from eagle nests did not generate much excitement because they were not easily noticed by the media and the public. The FWS wanted something splashy that would capture the public's imagination and generate media coverage. Breeding bald eagles in captivity was an ideal way to accomplish this. The FWS could give tours of the captive breeding facilities at Patuxent to members of Congress and the all-too-credulous media who would gush over apparently terrific job being done and the supposed significant boost to bald eagle conservation. Corporate America got in on the action as well. From 1983 to 1986 the DuPont Corporation contributed $200,000 so that the capacity of the captive breeding effort at Patuxent could be doubled.[120] The FWS issued three press releases to celebrate the contributions, and DuPont's contributions were covered widely in the media, including the *New York Times*.[121] In 1984, at a ceremony in Washington, D.C. that featured a live bald eagle and was covered by the media, the Secretary of Interior, William Clark, presented DuPont with an award for its contributions to the captive breeding program.[122] This is just what the FWS wanted, even if the captive breeding program at Patuxent was a triumph of style over substance.

CONCLUSIONS ON REINTRODUCTIONS

States and private organizations deserve almost all the credit for reintroducing bald eagles to areas from which they were extirpated because it was they, not the FWS, that undertook most of the painstaking and labor intensive work. At best, the FWS played a peripheral role, with funding being the most significant contribution.

[120] U.S. Fish and Wildlife Service 1986c

[121] U.S. Fish and Wildlife Service 1983b; U.S. Fish and Wildlife Service 1984c; U.S. Fish and Wildlife Service 1986c; New York Times 1983.

[122] Deseret News. 1984.

POPULATION SURVEYS

States, not the FWS, largely carried out surveys of bald eagles populations. These surveys varied as to their frequency and the type of data collected, but they were essential for assessing the health of the bald eagle's population in the lower 48 states. In 1963 the National Audubon Society carried out the first nationwide survey in the era preceding the ESA. Audubon carried out another survey in 1973. The next national survey occurred in 1974 and the FWS coordinated it, but states carried out much of the actual survey work. Around the early 1970s, states, particularly those with large eagle populations, began conducting annual surveys; Minnesota and Florida in 1973, Michigan at some point in the late 1960s or early 1970s, Wisconsin and Oregon in 1979, and Washington in 1980. In the late 1970s and early 1980s, as bald eagle populations around the country started to grow markedly and expand into regions from which they had been extirpated, increasing number of states began conducting regular, usually annual, nesting surveys. Then, in the mid-to-late 1990s, some states stopped conducting annual surveys because their eagle populations were so large and robust that annual surveys were no longer necessary. For example, Minnesota stopped annual surveys in 1995, after which the state conducted a survey every five years, and Washington stopped annual surveys in 1998.

Another important component of population surveys was the mid-winter surveys, which count eagles from the lower 48 states as well as eagles from Canada that migrate south for the winter in search of food. The National Wildlife Federation (NWF) initiated and coordinated mid-winter surveys from 1979-1991. In 1984, NWF made the survey more scientifically valid by delineating standard survey routes and methods to be used annually by the many volunteers who gathered the raw data. From 1992 to the present, the federal government has coordinated the survey. NWF's decision to abandon coordination of the survey closely mirrors the organization's evolution from being more involved in on-the-ground conservation projects in favor of a more hands-off approach that is primarily focused on lobbying and pressure tactics.

MOST EAGLES IN ALASKA AND CANADA

Some claim that but for the ESA, the bald eagle would have gone extinct (see Claims of Success above). This simply is not true because during the eagle's tenure under the ESA the overwhelming majority of bald eagles existed in Canada (primarily British Columbia) and Alaska.

According to the FWS, there are roughly 50,000 bald eagles in Alaska and the same number in Canada.[123] To get a sense for what percentage of the population these 100,000 birds represent, the assumption has been made, based on research carried out in British Columbia, that all bald eagle populations consist of two-thirds adults and one-third immature birds.[124] Applying this ratio to the estimated 9,186 pairs in the lower 48 states in 2006 yields 27,558 birds. Therefore, the eagles in the lower 48 states represent only about 28% of the species' total population, while eagles in Alaska and Canada are around 72%. Furthermore, eagles in Alaska and British Columbia were scarcely, if at all, affected by the pesticide DDT and have been relatively secure in the decades since the 1972 DDT ban. There are two reasons for this. First, DDT was essentially not used in these regions. Second, eagles in Alaska and British Columbia tend not to migrate far south, especially into regions of the lower 48 where they could ingest DDT. If these eagles do migrate they usually go to the coastal regions of British Columbia and southeast Alaska where relatively mild winters result in open water for fishing as well as salmon carcasses from the previous summer's spawning runs.

Since eagles in Alaska were never listed under the ESA and, of course, the Act does not extend across the border to Canada, the Act did nothing to conserve these birds, unless the odd bird would stray south to the lower 48 states. This means that had bald eagles in the lower 48 states never been listed under the ESA, the species as a whole would still have thrived because around 72% of the species' population was very secure without the Act. The ESA did not "save" the bald eagle from extinction, despite what some proponents of the Act have stated or implied. Proponents of the Endangered Species Act do not like to mention that such an overwhelming majority of the bald eagle's population did not benefit from the Act because do so would deprive

[123] U.S. Fish and Wildlife Service 2004b.

[124] Blood Anweiler 1994, p.50.

the ESA of credit.

From around the time of the ESA's passage in 1973 until recently, the existence of the vast majority of the bald eagle's entire population in areas where they were never listed under the ESA has troubled pressure groups. In 1976, the eagle's secure status in Alaska was of no comfort to Alexander Sprunt, former Research Director for the National Audubon Society.

> "I believe that all bald eagles are endangered. The rationale for considering the 'northern' eagles 'not endangered' is apparently the healthy population which exists in southeastern Alaska. With the increase in lumbering operations in the heart of their range, the construction of the Alaska pipeline, the increasing pollution of the seas, the future of even this population would seem anything but secure. We know there are now populations of so-called 'northern' eagles which are in greater danger of extirpation than some populations of 'southern' eagles."[125]

It is remarkable that such an alarmist viewpoint could have been held by the head of research for Audubon, which was, and still is, widely regarded as the foremost bird conservation group. Moreover, Sprunt's statement belies a sentiment that was more concerned with playing politics than it was with the status of the bald eagle.

More recently, pressure groups admitted, albeit implicitly, their discomfort with the massive and healthy population of bald eagles in Alaska and Canada by failing to mention the existence of these eagles. There are several examples of this in the Claims of Success section above, as well as other examples.[126]

---

[125] Graham 1976.

[126] "The recovery of the Bald Eagle is one of the great success stories of the ESA. It is hard to believe that not long ago America risked losing its majestic national symbol to extinction. By the early 1970s this grand bird was in dire peril, and its survival and recovery are a result of the protections provided to it by the ESA. If lost to extinction, the Bald Eagle would have come to represent great loss and negligence, rather than the symbol of freedom and strength it has long embodied. Now, with the Bald Eagle strongly recovered, it is symbolic not only of our national ideals but also of sound stewardship and the benefits of sensible federal protections. The pre-Columbian Bald Eagle population, in the area of the lower 48 states, is estimated to have been 100,000 birds. By 1963, there were only 417 known nesting pairs. Bald eagles had been devastated by years of hunting, habitat loss, and exposure to pesticides. By the early 1970s it was known that pesticides such as DDT were concentrating in the food chain and causing the thinning of the eagles' eggshells. The effects of DDT dramatically reduced breeding success because eggshells broke during incubation or young birds did not hatch. The U.S. Fish and Wildlife Service in 1967 listed the Bald Eagle as endangered under the law that preceded the Endangered Species Act. Bald eagles qualified for federal protection in 1973 under the newly authorized ESA. In 1972, the U. S. Environmental Protection Agency (EPA) banned most uses of DDT. Listing the Bald Eagle afforded greater protection for important habitat, and saw the beginning of intensive monitoring and management of

OTHER LEGISLATION, THE BALD EAGLE'S CHARISMA & SHOOTING

While these three issues—other legislation, shooting, and the bald eagle's charisma—may appear unrelated, they are all fall under the broader issue of factors other than the ESA that helped conserve the eagle.

OTHER LEGISLATION

Prior to the ESA's passage, injuring or killing bald eagles in the U.S., otherwise known as "taking" the species, was illegal under several federal statutes, the most prominent of which was the Bald Eagle Protection Act (BEPA). Congress passed the BEPA in 1940, and the intent of the law was to protect the bald eagle by, among other things, making it a crime to take, possess, transport or engage in commerce of bald eagles or their parts unless so authorized by the Interior Department.[127] Violating the BEPA resulted in a maximum fine of $500 and six months jail. In 1959 Congress amended the BEPA to add Alaska, which had been granted statehood in

---

bald eagle populations in the wild as well as an extensive captive breeding program. In 1995, the U.S. Fish and Wildlife Service "downlisted" the Bald Eagle from endangered to threatened in most states. The FWS estimates there are 7,066 nesting pairs of bald eagles today in the continental United States."—National Audubon Society (National Audubon Society 2006)

"The bald eagle was at the brink of extinction, but in the 1970s, Americans took bold steps to protect it. At that time, there were only 417 nesting pairs left in the lower 48 states. Today, eagle numbers are strong with over 7,000 breeding pairs spread across the lower 48. This is thanks to the work of landowners, conservationists, business owners, scientists, federal, state and local agencies, and our champions in Congress."—National Wildlife Federation (National Wildlife Federation. ND. Bald Eagles)

Note how both Audubon and NWF state that the bald eagle is threatened with extinction and that no mention is made of eagles in Alaska or Canada. If someone did not know better, they would likely believe that eagles only existed in the lower 48 states after reading these two statements. Portraying the bald eagle as on the brink of extinction is a common tactic by pressure groups as well as the federal government. The eagle, of course, was not facing *extinction*, rather *extirpation* in the lower 48 states. Apparently making such a distinction is too much trouble for those who bandy about the term extinction. But given that the FWS and pressure groups put a great deal of effort into public relations for the ESA, drawing such a distinction would be easy to do, especially because much of the public likely does not know what extirpation means but does know the definition of extinction. In addition, one of the primary missions of the FWS and pressure groups is public education. But extinction is a more dramatic term than extirpation, and the FWS and pressure groups are always looking to catch the public's attention so as to garner media coverage and funding.

[127] Bald Eagle Protection Act of 1940.

1958.[128] Congress amended the law again in 1962 to extend protection to golden eagles because juvenile bald eagles could be mistaken for golden eagles. Thereafter the law was referred to as the Bald and Golden Eagle Protection Act (BGEPA).[129] In 1972 Congress amended the BGEPA again, and one change was that if the federal government wanted to obtain a criminal conviction, it had to prove the accused had *mens rea*, or criminal intent. Another change was that the criminal penalties increased to $5,000 and 1 year prison, both of which could be doubled for a second offense. Lastly, the amended law added civil penalties; $5,000 for each violation.[130] But when the ESA was passed in 1973, penalties increased: civil penalties to a maximum of $10,000 per violation; and criminal penalties to $20,000 and/or 1 year in jail.[131]

However, the legislation that gave penalties their biggest boost was not the ESA in 1973 but the 1987 Criminal Fines Improvement Act—$100,000 and/or 1 year in jail for an individual committing a misdemeanor, $250,000 for a felony; and for organizations and companies, $200,000 and/or 1 year in jail for a misdemeanor, and $500,000 for a felony.[132] After 1987, and even though the ESA subsequently increased criminal penalties to $50,000, the maximum penalties under the BGEPA and ESA were still superseded by the maximum penalties established under the Criminal Fines Improvement Act. This is germane because one of the claims by some pressure groups is that the ESA conserved the eagle by significantly increasing penalties. "The recovery effort also benefited from the far-reaching 'take' restrictions of the ESA," states Environmental Defense Fund. "Although earlier laws offered limited protection, the ESA substantially increased penalties for those who shot, poisoned or otherwise harmed eagles."[133] Even though this is true, credit for the most significant penalty increases goes to the Criminal Fines Improvement Act, not amendments to the ESA.

---

[128] Bald Eagle Protection Act of 1959.

[129] Bald and Golden Eagle Protection Act of 1962.

[130] Bald and Golden Eagle Protection Act of 1972.

[131] Endangered Species Act of 1973.

[132] Criminal Fines Improvement Act of 1987.

[133] Environmental Defense Fund 2004b.

CHARISMA

As America's national bird, and the bird that adorns the Great Seal of the United States, the bald eagle is perhaps this country's most charismatic and easily recognized animal. The bald eagle's status is why Congress passed the Bald Eagle Protection Act in 1940 and it is why individuals, organizations and corporations are always eager to be involved in conservation projects for the species. Had not the ESA been passed, it is virtually inconceivable that the general public, states, and Congress would have tolerated the potential extirpation of the bald eagle in the lower 48 states. In all likelihood, had not the ESA been passed, there would have been massive efforts to conserve the eagle in the lower 48.

SHOOTING

The efficacy of laws other than the ESA and the eagle's unique charisma can be seen through declining shooting mortality. Unfortunately, shooting bald eagles has been a persistent problem and it was a significant cause of mortality. But the ESA, specifically the Act's land-use control provisions, was not necessary to address this problem. It is, however, important to keep in mind that shooting has been a far less significant threat to the bald eagle than DDT and habitat destruction. By their very nature, the effects of DDT and habitat destruction are very difficult, if not impossible, to quantify for a number of reasons, one of which is that they tend to be indirect sources of mortality that are rarely observed. Direct mortality, such as shooting, is much more easily observed so long as one has an eagle carcass and that the carcass is not too decomposed to be necropsied. It appears that the impact of shooting on bald eagles has declined, as the following chart indicates.

Time Period	Mortality from shooting
1961-65	62%[134]
1966-68	41%[135]
1969-70	46%[136]
1971-72	35%[137]
1973-74	25%[138]
1975-77	20%[139]
1975-81	18%[140]

In addition to these statistics, between 1963 and 1984 the FWS necropsied 1,428 eagles at the federal National Wildlife Health Center. Gunshot was the second leading cause of death, accounting for 22% of the eagles examined.[141] Also, shooting was a major cause of mortality in Alaska. From 1917-1952 the territory of Alaska offered a bounty because it was thought eagles were competing with salmon fishermen. As a result, people killed more than 128,000 eagles. In 1953 the state repealed the bounty, and in 1959 bald eagles in Alaska were brought under the protection of the federal Bald and Golden Eagle Protection Act.[142]

In addition to increased legal protection and penalties, shooting also seems to have declined considerably due to changing social norms. Shooting raptors was acceptable in the early-to-mid 20th century, in large part because residents of rural areas and visiting hunters, where most raptors existed, believed raptors posed a threat to game birds, fish, and livestock, such as lambs and poultry. Raptors were also shot for fun because as large birds, they presented big and relatively easy targets to shoot. But growing social awareness, led by the budding

[134] Coon et al., 1970.

[135] Mulhern et al., 1970.

[136] Belisle et al., 1972.

[137] Cromartie et al., 1975.

[138] Prouty et al., 1977.

[139] Kaiser et al., 1980.

[140] Locke 1982.

[141] Wood et al., 1990.

[142] Buehler 2000, p.24.

conservation movement in the early 20th century, showed that raptors were a minimal threat to these animals, and that it was immoral to shoot magnificent birds like the bald eagle.

BANNING LEAD SHOT

The federal government banned lead shot for use in waterfowl hunting in 1991 after a five year phase-in that began in 1986. The Environmental Protection Agency (EPA) banned lead shot because the agency determined that, because shot is toxic when ingested, it was causing mortality in waterfowl (ducks, geese and swans would ingest lead shot when feeding along the bottom of bodies of water) and in birds that ate waterfowl, such as bald and golden eagles.[143] Lead, however, was a relatively minor cause of eagle mortality. From 1963-1984, of the 1,428 bald eagles necropsied at the National Wildlife Health Center, 11% died of poisoning, one cause of which was lead.[144] A more recent estimate is that 10-15% of post-fledgling mortality is due to lead poisoning.[145]

Due in part to bald eagle mortality, but also due to waterfowl mortality as well, the FWS and pressure groups became concerned about the detrimental effects of lead shot. While the FWS and EPA were engaged in the issue, their pace of change was apparently too slow for some groups, most notably the National Wildlife Federation (NWF), which led the charge, starting at least in 1984, to get lead shot for waterfowl hunting banned.[146]

Yet even after the EPA banned lead in 1991, the substance still continued to cause bald eagle mortalities. Between 1980 and 1995, of the 634 injured or sick bald eagles treated at the University of Minnesota's Raptor Center (50% of which were released back to the wild), lead poisoning was the primary cause of admission for 22%.[147] It is notable that the rate at which bald eagles were admitted to the Raptor Center before and after the lead shot ban remained essentially the same, indicating that bald eagles were still acquiring lead from sources other than lead shot.

---

[143] Kaiser et al., 1980.

[144] Buehler 2000, p.21.

[145] Fisher et al., 2006.

[146] National Wildlife Federation 1984.

[147] Kramer and Redig 1997.

The most likely sources are bullets and bullet fragments from deer carcasses or gut piles, and lead weights used for recreational fishing.[148]

MULTIPLE RECOVERY REGIONS

During the bald eagle's tenure under the ESA, the FWS designated five separate recovery regions, and this was an enormous waste of money and time. The recovery regions all required separate recovery plans, which meant that each region could be delisted independent of the others. As with the American peregrine falcon, the FWS rationalized delineating separate recovery regions by deeming that the bald eagle's range was simply too large and diverse to be covered by one plan.[149]

Unfortunately, in the case of the bald eagle, as with the American peregrine falcon, the FWS chose not to delist regions when they merited it, and this needlessly delayed the reclassification of the eagle, from endangered to the less-imperiled status of threatened, as well as from threatened to off the list entirely. Instead, the FWS insisted on reclassifying the eagle over the entire lower 48 states, which obviated the need for the five recovery regions and contradicted the agency's own logic for why separate recovery regions were required in the first place. A further discussion of this is below in section titled, "Delayed Delisting." The combination of the five regions, plus the FWS's refusal to delist individual regions when warranted, makes the agency's designation of the five separate recovery regions looked more like a full employment program for the federal and state biologists, as well as those from academia and the private sector, that were on the recovery teams or were involved in bald eagle conservation efforts, than a prudent management decision.

Furthermore, the FWS's decision to designate the Southwest as a recovery region was

---

[148] Kramer and Redig 1997.

[149] The five recovery regions are:

1) Northern States (ME, NH, VT, MA, CT, RI, the northern one-third of NJ, NY, the western half of PA, OH, MI, IN, IL, WI, MN, IA, MO, OK east of the 100th meridian, KA, NB, SD, ND, CO, and UT)
2) Chesapeake Bay (MD, DE, Virginia east of the Blue Ridge Mountains, the pan handle of WV, the eastern half of PA, and the southern two-thirds of NJ)
3) Southeastern (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, TX east of the 100th meridian, WV other than the pan handle)
4) Pacific (ID, NV, CA, OR, WA, MT, and WY)
5) Southwest (TX and OK west of the 100th meridian, NM, AZ, and CA adjacent to the Colorado River).

silly because this it is arid region, much of it desert. The bald eagle, however, is a species that depends on relatively large bodies of water to survive, which, obviously are in scarce supply in the most arid region of the country. As a result, the Southwest has been, and will continue to be, poor eagle habitat, and the region will always have a small, relatively insecure eagle population.

DELAYED RECLASSIFICATION

The FWS delayed unnecessarily reclassifying the bald eagle—from endangered to the less-imperiled status of threatened, as well as delisting, or removing the species from the ESA's protection altogether—for two main reasons; land-use control, and funding. The bald eagle's enormous range, which encompassed large portions of the lower 48 states, provided a useful land-use control tool, and as a result the FWS and pressure groups were very reluctant to let the eagle fly free. Also, the FWS, pressure groups and researchers were loath to lose the most prominent poster species of the ESA because the eagle had proven to be such an effective means to raise funds, obtain research grants, and garner media attention. In the case of bald eagles in Arizona, pressure groups were so dismayed by the eagle's delisting in 2007 that they successfully sued to have the FWS re-list eagles in Arizona.

Before exploring how and why the FWS and pressure groups did not want the eagle delisted, it is first necessary to compare the eagle's population to its recovery goals, as the following chart shows. In particular, take note of the column titled "Dates goals achieved."

Recovery regions	Recovery goals	Dates goals achieved	1999 Population*	2006 Population**
Northern	Downlist: no goals	NA	1998: 2,204 pairs, productivity ≥ 1.0 since 1994	2005: Approximately 3,495 pairs, and average productivity > 1.0 since 1991
	Delist: ≥ 1,200 pairs, distributed over at least 16 states, an average productivity of 1.0 young/occupied nest	1991 for pairs, distribution, and productivity		
Chesapeake Bay	Downlist: 175-250 pairs, 1.1 young/occupied nest, protection of "suitable nesting, roosting, and foraging habitat" that "will support a growing population"	1988 for pairs and young	1998: 538 pairs, and an average of 1.21 young/occupied territory	2003: Approximately 976 pairs and an average of 1.19 young/occupied

	Delist: 300-400 pairs, 1.1 young/occupied nest over five years, "permanent protection" of enough nesting habitat to support 300-400 pairs, and sufficient roosting habitat "to accommodate population levels commensurate with increases throughout the Atlantic region"	1992 for pairs and young[150]		territory from 1998-2003
Southeast	Downlist: ≥ 600 occupied breeding territories distributed in ≥ 9 of 12 states, > 0.9 young/occupied territory, >1.5 young/successful nest, ≥ 50% nests successfully raise ≥ 1 young, all of which have to occur over at least a 3 year average, and "additional documentation of population vigor and adequate support habitat"	1992 for occupied territories and young.	1998: 1,485 pairs, and average productivity of 1.17 young/occupied territory since 1991	2003: Approximately 2,219 pairs, and average productivity of 1.24 young/occupied territory from 1997-2000
	Delist: if downlisting criteria continue for an additional 5 years	1997		
Pacific	Downlist: annual increase in number of nesting pairs from 1985-1990, and downlisting can occur independently for any of the five states eagle listed as endangered (MT,WY,ID,NY,CA)	1990 for nesting pair increase	1998: 1,480 pairs, and productivity ≥ 1.0 since 1990	2003: approximately 1,749 pairs, and average productivity of 1.0 young/occupied territory since 1990
	Delist: ≥ 800 nesting pairs, average 1.0 young per occupied territory, average breeding success rate ≥ 65% over 5 years, distribution in ≥ 80% of the 47 management zones with nesting potential (38 zones), and not a decline of ≥ 100 wintering eagles	1990 for nesting pairs and young 1994 for breeding success rate		
Southwest	Downlist: population expansion into one or more river drainages in addition to Salt and Verde River systems (in Arizona), and productivity of 10-12 young/year over five years	1985 for productivity 1985 for population expansion	1998: 40 pairs, and productivity 0.63 young/occupied territory	2003: 43 pairs, and productivity of 0.75 young/occupied territory in Arizona in 2004
	Delist: no goals	NA		

*1998 data used because it is the most current
**2006 data used because it is the most current

As is clear from this chart, the bald eagle could have been delisted in the Southwest in 1986 (one year is allowed for the FWS to publish proposed and final rules in the Federal

[150] Watts 1999, p.11.

Register, hence 1986 instead of 1985), downlisted in the Chesapeake Bay by 1989, and delisted in the entire lower 48 states by the early 1990s. Habitat goals have not been included in the "Dates goals achieved" column because such goals are vague. In addition, as will be shown later in this section, habitat, or rather the claim that the eagle had insufficient habitat, was one of the tactics employed by those opposed to delisting even if the eagle's population was large and healthy. Also, under the ESA, recovery goals are not compulsory; they are merely best estimates of what recovery teams deem are necessary. Therefore, delisting can take place without goals being met. The steady population increase in the lower 48 states—indeed, each time breeding pairs or wintering bald eagles have been counted since the Act's passage in 1973, the population showed an increase—indicated the bald eagle had a large and healthy population by at least the early 1990s. So even if one or more recovery goals relating to habitat had not been met by the dates contained in the "Dates goals achieved" column, increasing eagle populations provided very strong indications that eagles in the respective regions were healthy and merited reclassification.

The following examination of opposition to delisting will be broken down into sub-categories of the entities opposed to delisting, starting with the FWS, then generalized opposition by pressure groups, followed by a look at the four areas of the U.S. where opposition occurred; the southwest, Chesapeake Bay, Pacific Northwest, and South Carolina.

U.S. FISH & WILDLIFE SERVICE OPPOSITION TO DELISTING

The FWS delayed unnecessarily reclassifying the bald eagle. This first instance occurred after the agency published an "Advance Notice of a Proposal to Reclassify or Delist the Bald Eagle" in 1990.[151] The Notice was noteworthy for two reasons. One, as the FWS stated:

> The Service believes that the available population data provide a convincing argument for reclassifying the bald eagle. Bald eagle populations have met or exceeded the recovery plan goals for reclassification to threatened in each of the five recovery regions with the exception of the Southwest. In 1989, the number of known occupied nesting territories in

[151] U.S. Fish and Wildlife Service 1990a.

> the Southeast was 583, approximately the plan goal of 600 for the region. However, a distributional component by State for nesting pairs in the region is still lacking. Although the Northern States Recovery Plan identifies only delisting (recovery) criteria, the Service believes that downlisting to threatened in the Northern States is justified. The bald eagle has met the recovery goal for the ratio of young produced per territory and, through the 1988 breeding season, achieved 84 percent of the number of occupied nesting territories identified for delisting in the Northern States region.[152]

Just to be on the safe side, "[t]he Service has decided to await the results of the 1990 bald eagle breeding season prior to reaching a final decision on any rulemaking to reclassify the bald eagle." Two, the FWS also stated, "Should one or more endangered populations of the bald eagle be reclassified to threatened…," which clearly means that recovery regions could be reclassified independently.[153]

When 1991 rolled around, however, the FWS took no action on the Advance Notice even though the bald eagle population had increased since 1990 from 2,680 to 3,035 pairs, or 13%.[154] It was not until 1994, when the FWS formally proposed to downlist the bald eagle from endangered to the less-imperiled status of threatened, that the agency provided some insight into the Advance Notice. Apparently, opposition from environmental pressure groups and state wildlife agencies dissuaded the FWS from publishing a downlisting proposal prior to 1994.[155] Politics also probably had something to do with pressure group opposition to the 1990 Advance Notice but not the 1994 proposed downlisting. In 1990, a Republican, George H.W. Bush, was President. Pressure groups were very much opposed him and were keen not to provide him with any opportunity to claim an environmental victory. But in 1994, with a Democrat, Bill Clinton, in office, the pressure groups were only too happy to help him burnish his environmental credentials, and so they supported the proposed downlisting.

---

[152] U.S. Fish and Wildlife Service 1990a, p.4211.

[153] U.S. Fish and Wildlife Service 1990a, p.4211.

[154] The total number of pairs from 1989 and 1990 are used because the Advance Notice was published in February, well before the results from the 1990 breeding season had been tallied. The same reasoning applies to the FWS's decision to take no action one year later (U.S. Fish and Wildlife Service. ND. Bald Eagle Pairs).

[155] U.S. Fish and Wildlife Service 1994e.

When the FWS proposed to downlist the eagle in 1994, the agency and pressure groups predictably credited the ESA. "The eagle's recovery is a tribute to the success of the Endangered Species Act and other conservation laws, and to the selfless efforts of the many, many people who have worked so hard to bring the eagle back from the brink of extinction," stated Mollie Beattie, then FWS Director.[156] "Bald eagles are living proof of the success of the Endangered Species Act," asserted Karyn Strickler, campaign director for the Endangered Species Coalition.[157]

In 1995, the FWS went ahead and downlisted the bald eagle in the lower 48 states where it was listed as endangered, except for Oregon, Washington, Minnesota, Wisconsin and Michigan where it had been first been listed under the ESA in 1978 as threatened.[158] "Through landmark laws such as the Endangered Species Act and the Clean Water Act, we have proven we can conserve and restore vital habitat needed by species such as the bald eagle," proclaimed Interior Secretary Bruce Babbitt.[159]

In 1999, the FWS published the long-awaited proposal to delist the eagle. To mark the occasion, a ceremony, complete with worldwide media coverage, a cheering crowd and a live eagle, was held on the lawn of the White House with President Clinton making the announcement. "The return of the bald eagle is a fitting cap to a century of environmental stewardship…Extinction is not an option, not for the eagle, not for other creatures put here by God," Clinton stated.[160] Not to be left out, Interior Secretary Babbitt was in full form. "America was the first nation on earth to pass a comprehensive law protecting endangered species, the Endangered Species Act, and once again we have shown that this landmark law works," he stated. "Today the American bald eagle is back."[161] "This is a tremendous victory for the bald eagle and for the Endangered Species Act," said Michael Bean of the Environmental Defense Fund. "There is no prouder symbol of our nation's commitment to preserving our natural

---

[156] U.S. Fish and Wildlife Service 1994b.

[157] Endangered Species Coalition. 1994.

[158] U.S. Fish and Wildlife Service 1995e.

[159] U.S. Fish and Wildlife Service 1995d.

[160] Council on Environmental Quality 2000.

[161] U.S. Fish and Wildlife Service 1999e.

heritage than the eagle. And there is no greater tribute to the Endangered Species Act than to allow its finest success story to fly off the list, free at last."[162] According to the FWS, "A final decision is expected in July 2000."[163] The agency mentioned this because, under the ESA, the federal government has one year to make a final decision, either to delist or not.

Yet nothing happened in July 2001 and for the following five-and-a-half years until the FWS basically reissued the proposed delisting on February 16, 2006 because, according to the FWS, the information used to support the 1999 proposal was outdated.[164] Delisting did not occur until February 2007, more than seven-and-a-half years late. "Partly it just fell through the cracks," according Jamie Rappaport Clark, then Executive Vice President of Defenders of Wildlife and Director of the FWS when the agency issued the delisting proposal in 1999. This explanation, however, does not make sense. There is no conceivable way the FWS would allow the ESA's highest profile species to fall through the cracks. The true reason must have been something else, and, as subsequently became clear, it was the FWS's desire to transfer the ESA's punitive land-use control provisions to the Bald and Golden Eagle Protection Act (this will be examined in a following section of this profile).

OPPOSITION TO DELISTING FROM PRESSURE GROUPS AND OTHERS

Resistance to delisting predictably came from environmental pressure groups as well as other advocates and researchers. This resistance has been both generalized as well as specific to four regions; Arizona, Chesapeake Bay, Pacific Northwest, and South Carolina.

General Resistance

Some pressure groups opposed delisting because they thought the FWS was playing politics. "What has happened is that the delisting of the bald eagle has been so politically motivated, they wanted so much to get this success story out there, that other threats to the eagles have been ignored, and they now realize this [that habitat has to be protected]," stated John

[162] Environmental Defense Fund 1999b.

[163] U.S. Department of the Interior 1999b.

[164] U.S. Fish and Wildlife Service 2006a.

Kostyack, of the National Wildlife Federation.[165] "I think it's a political move. It's trying to protect the Endangered Species Act," said Ann Schnapf, the National Audubon Society's assistant manager of the Florida Coastal Island Sanctuaries, about the proposed delisting. "I think it's important to have a strong Endangered Species Act. But once the eagle's off that level of protection, will we loosen the rules? We can't really afford to. This population is still very vulnerable to problems."[166] One would think that a proponent of the ESA like Schnapf would want to provide the Act with positive publicity.

Other pressure groups thought delisting was premature based on the eagle's historical population or that some sort of long-term goals, especially land-use control, needed to be met. "Even the bald eagle—which has rebounded significantly in recent decades—has not necessarily recovered to the point that it should be delisted," stated the advocacy group, American Lands. "Bald eagle populations in the lower 48 states are around 5,000 to 6,000 pairs. This is a fraction of their original 75,000 pairs."[167] Holding bald eagle delisting to the standard of the species' historic population is absurd because the bald eagle will never attain the population it had just prior to and soon after Europeans colonized America. And according to Bart Semcer, the Sierra Club's Washington lobbyist for fish and wildlife issues, the bald eagle's status under the ESA, "is not just about numbers; it's about meeting long-term stewardship responsibilities."[168] In addition to land-use control, funding also drove opposition to delisting. "When eagles lose their coveted Endangered Species Act protection, they will also lose what little government funding they once had," complained Al Cecere, President of the American Eagle Foundation. "Eagle groups and agencies should not have to resort to panhandling to watch over and help sustain our national bird."[169]

---

[165] Booth 2000.

[166] Gree 2000.

[167] American Lands Alliance 2000, p.26.

[168] Canon 2002.

[169] American Eagle Foundation 2006.

Arizona

The most vociferous opposition to delisting came from several pressure groups in Arizona. Almost all the eagles in the southwestern recovery region lived in Arizona so issues raised in objection to delisting in Arizona were essentially applicable to the entire region. The Center for Biological Diversity (CBD), along with the Arizona Audubon Council and the Maricopa County Audubon Society, led opposition to delisting in the southwest. Opposition to delisting by these groups took three forms; objecting to delisting, attempting to "uplist" the eagle in the southwest from its status of threatened to the more imperiled status of endangered, and, once the eagle was delisted in 2007, a successful effort to relist the eagle in the Southwest under the ESA.

All of these efforts were absurd and irrelevant to the bald eagle's conservation in the southwest for a couple reasons. First, the bald eagle in Arizona had, and continues to have, a larger population than it had historically due to manmade habitat (the construction of dams) and the introduction of non-native fish, which provided eagles with an abundant source of food. Second, the state of Arizona had for years taken the lead in protecting the bald eagle, and a number of other federal, state, municipal and tribal agencies also pitched in. All of these groups formed the Southwest Bald Eagle Management Committee in 1984, which would meet biannually to coordinate and share information about bald eagle management. The most significant boost to the bald eagle in the southwest has been the Arizona Bald Eagle Nestwatch Program, which began in 1978 and expanded to monitor and protect active bald eagle nests from human disturbance. The Management Committee was very committed to the bald eagle's conservation. So in 2006, as delisting was impending, the state of Arizona, a member of the Committee, published a comprehensive document charting the course for the bald eagle's conservation after delisting occurred.

Furthermore, doubt should be cast on the CBD's knowledge of bald eagle conservation and commitment to employing accurate information in furtherance of its goals because, among other things, the organization made a false and misleading claim about the certain extinction of the eagle but for being rescued by the ESA (see the "Claims of Success" in this profile).

Objections to delisting, the attempt to "uplist" the eagle from threatened to endangered, and relisting the eagle under the ESA all centered around three main issues: the southwestern

bald eagle population is unique, and one reason for this is that it is "reproductively isolated" from other eagle populations; "threats to the continued existence of the…eagle are increasing," such as global warming induced habitat changes, and funding for eagle protection is not secure; and supposed inadequacies in the FWS's delisting proposal, including the need for continued funding for habitat protection.[170] These three issues demonstrate the absurdity of the efforts by the CBD, Arizona Audubon, and Maricopa County Audubon to keep the bald eagle in the southwest from being delisted.

First, the bald eagle population in the southwest has always been small and isolated because the arid and semi-arid ecosystems in which it lives are sub-optimal habitat. Bald eagles live near water, and that is why such a large percentage of their population in the lower 48 states has always been found in states with lots of aquatic habitat. Population data from 2003 demonstrates this: Florida-1,133 pairs; Wisconsin-850; Minnesota-681; Washington-664; Virginia-435; Oregon-416; Michigan-405; Maryland-338; Maine-309; Louisiana-294; Montana-216. In 2006 these eleven states contained some 75% of the population in the lower 48 states.[171] By contrast, the 47 pairs in the southwest recovery region in 2006 represented a miniscule portion, 0.5%, of the population in the lower 48.[172]

The CBD, Arizona Audubon and Maricopa Audubon also complained that the bald eagle population in the southwest should not be delisted because it was "extremely small without prospect for significant expansion."[173] The three groups claimed the "[l]oss of this discrete population would result in a significant gap in the range of the Bald Eagle."[174] This is ridiculous, as the above numbers for the lower 48 make clear and the fact that the southwest is such marginal habitat for the eagle. Even the CBD admits that deserts are not good eagle habitat; "No other bald eagle population nests under such conditions of high heat and low humidity or suffers such high mortality."[175]

---

[170] Silver 1999.

[171] Environmental Defense Fund 2004b.

[172] Environmental Defense Fund 2004b.

[173] Silver 1999; Center for Biological Diversity et al., 2004, p.21.

[174] Silver 1999, p.1; Center for Biological Diversity et al., 2004, p.102.

[175] Center for Biological Diversity. ND. Saving the Desert Nesting Bald Eagle.

The contention by these groups that the southwest bald eagle population is isolated and marginal is akin to objecting to the fact that there are no longer giant ground sloths, mastodons, camels, giant bison, dire wolves, and a host of other large mammals currently inhabiting the southwestern U.S. as they did during the Pleistocene epoch, otherwise known as the most recent Ice Age. The precise reasons these animals became extinct are still the source of debate, but the underlying factor was climate change. The last Ice Age ended because the climate became warmer and, in places like the Southwest, markedly dryer. As a result, and also perhaps due to disease and human hunting, many species that comprised the spectacular assemblage of large mammals in North America went extinct.

The bald eagle in the southwest was far more common and widespread during the Pleistocene because there was far more wetland habitat in which it could live. But as the Ice Age waned, the eagle's population gradually decreased and became isolated in pockets in the newly forming deserts because there was simply less of the aquatic habitat they required to hunt for fish, the most important component of its diet, as well as feed on small terrestrial animals and even carrion. Unless and until a new ice age, or some other major climate shift occurs, the bald eagle population in the southwest will always be small and isolated, Endangered Species Act or not. After all, by its very definition, a desert contains almost no aquatic habitat. Hence, there never have been, nor ever will be, many bald eagles in deserts. So the complaint by the CBD, Arizona Audubon and Maricopa Audubon that the bald eagle's population in the southwest is small and isolated is patently absurd because the size and spatial patterning of the eagle's population in the southwest has been overwhelmingly due to the immutable forces of climate change that occurred thousands of years before the ESA's passage.

The objections to delisting by the CBD et al. are also bizarre because had it not been for human-created habitat in Arizona, the bald eagle's population would almost certainly be smaller than it was around the time of delisting in 2007 and continues to be to this day. This is not the case, however, according to the CBD. "But 'nesting' may be a misnomer these days: primarily due to habitat loss, only a few dozen breeding pairs are known to remain on Earth" states the group.[176] This assertion paints a highly misleading picture.

The bald eagle's population in Arizona, which contains virtually all of the Southwest's

[176] Center for Biological Diversity. ND. Saving the Desert Nesting Bald Eagle.

population of the species, was higher at the time of delisting, and remains so, than it was historically because the construction of dams along rivers in Arizona created more bald eagle habitat than existed historically. Robert Ohmart, a professor of biology at Arizona State University, has searched the historical literature for mentions of bald eagles in order to determine the historical population size. According to him, "the citations in the literature are few. There were significant scientists in Arizona from the1900s on. I'm damned sure they [bald eagles] weren't here. We're not talking about missing a dinky little sparrow. You can't believe people wouldn't see a bald eagle."[177] Ohmart's research cannot be dismissed on the grounds it was authored by an opponent to bald eagle conservation because he has been identified by the Maricopa Audubon Society, one of the groups that tried to keep the eagle listed, as a "longtime friend of Maricopa Audubon."[178] In 1992 a number of prominent raptor biologists carefully examined historical records from the 1800s and early 1900s and concluded that there were twenty-two known and likely bald eagle nest sites in Arizona.[179] This is less than half the forty-seven pairs that existed when delisting occurred in 2007.

Even though Arizona's recent bald eagle population was more than double its historic levels, Ohmart was not happy. According to him, the Arizona bald eagle:

> "population has enough troubles without delisting them [*sic*]. The way we have screwed up the environment with building dams and introducing non-native fish like carp and catfish. We've aided and abetted the bald eagle by giving it a large food supply here. With reservoirs we created stock tanks, a reliable food supply. There's some justification for delisting them, but with all the problems, people still need to look out for them."[180]

In addition to this bizarre characterization of a reliable food supply as a problem, notice how Ohmart's argument is contradictory: he claims humans have "screwed up the environment" by building dams and introducing non-native fish; but then, in the next two sentences, he notes that

---

[177] Nolan 2004.

[178] Fibel 2001.

[179] Hunt et al., 1992.

[180] Nolan 2004.

the construction of these dams have created a "large" and "reliable food supply" that has "aided and abetted the bald eagle." It appears that Ohmart is well aware of the implications of his research, specifically that dams and non-native fish have been beneficial to bald eagles, and yet he is trying to minimize these implications.

Ohmart knows full well humans increased the food supply and created habitat, most notably a number of dams in central Arizona, because he co-authored a peer reviewed journal article examining the species preyed upon by bald eagles in Arizona.[181] Ohmart and his co-author found that 57.6% of the eagles' diet, as measured by biomass, was composed of fish. Of this fish biomass, 76% was from non-native species (channel catfish, carp, flathead catfish, bullhead catfish, and various species of bass). The native suckers, which are essentially giant minnows, composed 23%, and unidentified fish, 1%.[182] Another peer reviewed journal article had similar findings: 76% of the eagle's diet consisted of fish, 18% mammals, 4% birds, and 2% reptiles and amphibians. Of the types of fish that were able to be identified, 71% were non-native while 29% were native.[183] Yet another peer reviewed article contained essentially the same results; 76% of the eagle's diet was fish, and of this 72% consisted of non-native fish species.[184] The CBD and the two Audubon groups conveniently omit the overwhelming importance of the construction of dams and non-native fish from their objections to delisting.

Another peculiar aspect of efforts to prevent the eagle from being delisted in Arizona is that the CBD contended delisting was illegal. Referring to the goals laid out in the recovery plan, Kieran Suckling of the CBD said, "the objectives were not met in 1999," when delisting was proposed, "and I've seen no indication that they've been met today. Therefore, it is premature, and illegal, to delist."[185] The reality, however, is "[t]he goals of the Southwestern Recovery Plan were met within three years of its drafting," according to the Southwest Bald Eagle Management Committee.[186] In addition, recovery goals are not legally binding. The FWS

---

[181] Haywood and Ohmart 1986.

[182] Haywood and Ohmart 1986, p.37.

[183] Grubb 1995.

[184] Hunt et al., 2002.

[185] Scheer 2004.

[186] Southwest Bald Eagle Management Committee. ND. *Arizona Bald Eagle Q & A Sheet*.

has discretion to determine how closely the goals should be followed for delisting or downlisting to occur. Kieran Suckling's assertion that delisting is illegal because recovery goals were not met when delisting was initially proposed in 1999 or in 2004 simply has no basis in fact or in law.

In the strange world inhabited by people like Ohmart, Suckling, and groups like the CBD, Arizona Audubon and Maricopa Audubon, this good news—that the bald eagle had a larger population than it ever had historically because of the increased availability of food and habitat and that the bald eagle's population was healthy enough to merit delisting—was actually bad news. One of the threats to the eagle's continued existence identified by these three groups was the decline of native fish populations.[187] Yet, as Ohmart admitted, the combination of more bald eagle habitat and more fish biomass on which eagles can feed, both of which are due to human intervention, resulted in a larger eagle population than ever existed in the pre-industrial or early post-industrial past to which groups like the CBD seem to want to return Arizona.

An additional problem identified by the CBD and the two Audubon groups was reproductive rates. "Reproductive rates for Southwestern Desert Nesting Bald Eagles are lower than known in Bald Eagle breeding areas anywhere else."[188] And as evidence, these groups compared the southwest population's rate of productivity (the number of young fledged per occupied breeding territory) with that of populations in Alaska, Florida, Washington and Wisconsin. These states, however, along with Minnesota, had the largest and among the most productive bald eagle populations in the nation. This is because these states, especially Alaska, had, and continue to have, enormous amounts of high quality habitat. By contrast, Arizona contained, and will contain for the next few thousand years at least, very little suitable habitat. In addition, deserts are harsh and unforgiving habitats that have the potential to place more stress, such as heat and drought, on eagles than the temperate ecosystems found in places like Washington, Wisconsin and Minnesota. Deserts are hard places for a bird associated with aquatic ecosystems to make a living. As a result, lower productivity rates for bald eagles in deserts are to be expected. A number of factors can contribute to lower productivity, such as scarcity of suitable nest sites, eaglets are more prone to fatal heat stress, and a decrease in fish

[187] Center for Biological Diversity et al., 2004, pp.49-54.

[188] Silver 1999, p.14; Center for Biological Diversity et al., 2004, p.33.

populations, and hence food supply, caused by drought. Also, the CBD and Audubon failed to mention that the bald eagle's decreasing productivity in the southwest could be due to the population approaching the carrying capacity of the available habitat. Bald eagle experts in Florida and Minnesota have observed that eagle productivity in their states has declined as populations have saturated most of the available habitat.[189]

Behind all these purportedly biological and ecological reasons put forth by the CBD and the two Audubon groups as to why the bald eagle should not be delisted lay the two true reasons why these groups wanted so desperately to keep the eagle listed: land use control and money. The overarching reason was land use control because the bald eagle's large range, coupled with the ESA's enormous power, gave those like the CBD and the Audubon groups the ability to influence land and resource use over wide areas. "Habitat loss is the greatest threat to the bald eagle," stated Kieran Suckling of the CBD. "History has shown that neither the 1940 federal law nor state laws are adequate to protect eagle habitat. Only the ESA has that power. "[190]

While it is true that the 1940 Bald Eagle Act and laws in Arizona did not have the ESA's ability to regulate land and resource use, this was a very narrow view to take. Groups like the CBD and Audubon have relied heavily on the use of punitive and coercive laws like the ESA to get their way. The CBD in particular has made its name using the ESA as a club. According to the CBD, it is "North America's Premier Endangered Species Advocate. We have obtained federal Endangered Species Act protection for 280 species and the designation of over 38 million acres of 'critical habitat' from Texas to Alaska."[191] However, heavily reliance on these laws has fostered a confrontational approach that; seeks conflict and confrontation when dealing with regulatory agencies, drives the CBD to stake out strident and oftentimes extreme positions, and alienates many of the people who live in close proximity with endangered and threatened species. A far more effective approach would be to work more cooperatively, and the result might well be improved prospects for imperiled species because landowners, no longer threatened by the ESA, would actively seek to conserve species.

According to the CBD and the two Audubon groups, much the funding issue revolves

---

[189] Baker et al., 2000; Nesbitt 2003.

[190] Scheer 2004.

[191] Center for Biological Diversity. ND. The Race Against Extinction.

around the Arizona Bald Eagle Nestwatch Program. The Nestwatch Program was started in 1978 when U.S. Forest Service personnel approached the Maricopa Audubon Society to see if a volunteer from the Society could monitor a nesting pair of eagles. Since then the program, which was subsequently taken over by the Arizona Game and Fish Department, has grown so that between ten and fifteen nests are monitored annually. The goal of the program is to protect nests from destruction or disturbance by people, educate the public about bald eagles, and to collect data such as whether a nest is successful and if so how many young are fledged.[192] Between 1983 and 2005 the Nestwatch Program was responsible for saving 10% of all bald eagles fledged by keeping intruders away from nests, as well as helping to protect eaglets that left the nest prematurely.[193] Nest watchers typically consist of college students, or recent graduates, considering careers in conservation who see the Nestwatch Program as providing them with valuable experience. Most people likely do not volunteer to be nest watchers for the wages.[194] Nest watchers are paid $80 per day, work ten day shifts, with four days off in between, for a four month period from February to June. Nest watchers are also required to furnish their own transportation to a from the nest sites, which can often be in remote areas, as well as provide their own camping equipment and binoculars. Each breeding season, 10-15 nest sites are monitored, which means 20-30 nest watchers at a cost of approximately $137,000 for ten watchers and $205,500 for twenty watchers.[195] While the Nestwatch Program has been the most important factor in the southwestern eagle's conservation, after the banning of DDT, the CBD and the two Audubon groups have characterized it using the type of hyperbole that calls into question their commitment to sound, accurate analysis. "The Desert Nesting Bald Eagle would likely already be extinct except for the tireless and heroic efforts of human nest watchers," these three groups asserted.[196]

The CBD and the two Audubon groups were concerned about the security of funding for conservation initiatives such as the Nestwatch Program.[197] "If [the eagle is] taken off the list,

---

[192] Arizona Game and Fish Department. ND. Arizona Bald Eagle Nestwatch.

[193] Arizona Game and Fish Department. ND. Arizona Bald Eagle Nestwatch.

[194] Arizona Game and Fish Department. ND. Arizona Bald Eagle Nestwatch.

[195] Arizona Game and Fish Department. ND. Arizona Bald Eagle Nestwatch.

[196] Center for Biological Diversity et al., 2004, p.29.

[197] Center for Biological Diversity et al., 2004, pp.31-33.

that money will dry up," complained Bob Witzeman, Conservation Chair of the Maricopa Audubon Society.[198] In addition to the Nestwatch Program, there have been several other conservation efforts that the Arizona Game and Fish Department credits as having contributed to the eagle's conservation: an annual survey of all known nesting sites and a search for new sites; assessing occupancy and reproductive success of all known active nest sites through the use of helicopters; counting the wintering population of eagles; and studying the demographics of eagles that have had leg markings attached by researchers.[199] With the exception of the demographic study, as of 2005 these conservation programs cost approximately $438,000 annually.[200] This amount of money is a pittance for environmental pressure groups. Groups like the CBD, and the two Arizona Audubon groups not only have many wealthy members but they also have excellent contacts at many major philanthropic foundations. In addition, if private corporations in Arizona were approached they would likely contribute a large portion of the funding because they are always looking to support environmentally friendly causes, especially if it involves a dramatic, high profile, feel-good cause like the bald eagle that has the potential to generate positive media coverage.

If the CBD, Maricopa Audubon and Arizona Audubon wanted to, if they truly perceived bald eagle conservation as an important issue, then they could easily have raised the funds required to continue the Nestwatch Program and the other various monitoring programs that have proven so effective in conserving the eagle. Instead, CBD and the Audubon groups made the decision to sit on the sidelines and not get involved in the painstaking work of conserving the bald eagle on the ground, as opposed to sitting in their offices, firing off paper work and doing media interviews—in other words, lobbying and applying pressure. These three pressure groups did want to solve the funding problem because if they did the issue would have largely disappeared from public view. The media would do a feel-good story or two each year on the bald eagle in Arizona and that will be it.

But if the issue was perceived as being a source of controversy, it would generate much more media attention, which is precisely what these groups wanted. So it was with a straight

---

[198] Ebert 2005.

[199] Arizona Game and Fish Department. ND. Arizona Bald Eagle Q & A Sheet.

[200] U.S. Bureau of Reclamation 2005, p.50.

face that these so-called eagle advocates made the following type of statement; "The reason they've [bald eagles] survived is because of human interaction," said Robin Silver, board member of the CBD and Vice President of Maricopa Audubon. "We won't be doing it if they're off the list."[201] Such is the lack of commitment of these environmental pressure groups to supporting meaningful conservation programs. While these groups refused to engage in such conservation efforts, they were all too eager to spend large sums generating paper, including for the court fight over their efforts to get the eagle re-listed. The FWS will be "hard pressed to drive our eagles extinct without a fight," warned Silver because "lawyers are already lined up," to contest delisting.[202] Despite their unwillingness to acknowledge that more bald eagles existed than ever did historically, and to pony-up the small sum it would take to continue conservation programs, the CBD, Maricopa Audubon and Arizona Audubon tried to shift attention elsewhere. "Anti-conservation attitudes fuel these current delisting efforts without regard for the biological, behavioral and ecological isolation of this population," these groups claimed. "At the National level these efforts reflect the Bush Administration's historic antipathy for wildlife protection."[203] One could just as easily have claimed that the refusal of these groups to step forward with a guarantee of funding for eagle conservation projects after delisting occurred represented an anti-conservation attitude.

While the CBD et al. were bloviating, there were some who took a more measured view and were willing to admit that the bald eagle's status was a cause for celebration. "It's a success story. We're very proud of that. The Act is no longer needed for the species," stated James Driscoll, coordinator or the Arizona Fish and Game Department's bald eagle program.[204] "When I started with the department in 1992, we only had twenty-eight breeding areas and now have fifty," he added. "If we continue the management plan in place right now, which is what a new draft plan lays out, there should be no concern with delisting."[205]

---

[201] Nolan 2004.

[202] Ebert 2005.

[203] Center for Biological Diversity et al., 2004, p.5.

[204] Nolan 2004.

[205] Vanderpool 2006.

So-called eagle advocates would do well to heed Driscoll's words, especially when there are limited dollars to spend on wildlife conservation. The bald eagle is such a charismatic species that funding for it will seldom be a problem. There are, however, many, many more species that are not so lucky because their lack of charisma means they receive fewer conservation dollars. Imperiled wildlife in Arizona would be better served if the CBD, Arizona Audubon and Maricopa Audubon dedicated their resources towards actual, tangible, on-the-ground conservation efforts for truly unique and imperiled species, not the bald eagle.

Opponents of delisting the eagle in Arizona not only lost sight of the Act's ultimate purpose, which is to improve species to the point they no longer require protection, but, in efforts to paint an apocalyptic picture were delisting to occur, they also conveniently ignored the significant commitment the state of Arizona and others had made to conserve the eagle. The most notable aspect of this commitment was the Nestwatch Program, which the state was committed to continue after delisting occurred. Opponents of delisting also ignored a number of other initiatives, such as the 2006 *Conservation Assessment and Strategy for the Bald Eagle in Arizona* published by Arizona Game and Fish. The *Conservation Assessment* is an eighty-one page document, the purpose of which was to lay out the steps necessary for the ongoing conservation of the bald eagle after delisting occurred. The *Conservation Assessment* contained a detailed list of tasks for post-delisting eagle conservation, and an itemized budget for each task for the first five years post-delisting. In addition, the *Conservation Assessment* contained a copy of a Memorandum of Understanding between various federal, state and municipal entities stating that they would continue to conserve and protect the bald eagle after it had been delisted and that they would continue to undertake a number of conservation activities, including the four key ones; the Nestwatch Program, monitoring breeding pairs from helicopters, buffer zones and seasonal closures of areas around nests, and an annual survey to detect new nest sites.[206]

Along with the *Conservation Assessment*, were a number of other efforts to publish material to promote eagle conservation: an informational brochure for the public titled *Protecting an Arizona Treasure* in 2008 by Arizona Game and Fish and the Southwestern Bald Eagle Management Committee (the federal, state, tribal and municipal body formed in 1984, and which would meet biannually, to coordinate conservation and share information about the bald

[206] Driscoll et al., 2006.

eagle)[207]; a brochure directed at warning pilots how to stay away from bald eagle habitat, and put out by Arizona Game and Fish, the Southwestern Committee, along with the Arizona Department of Transportation[208]; and the 2008 publication by Arizona Game and Fish of detailed study on the demography of eagles in Arizona.[209]

Those knowledgeable and committed to bald eagle conservation in Arizona, as opposed to the CBD et al., knew the reality of the situation was that the eagle would be well cared for subsequent to delisting. "Basically what it [delisting] means is that we're going to continue the same amount of management for the species post de-listing as we do right now," according to James Driscoll of Arizona Game and Fish.[210] "For years they've [Arizona Game and Fish] demonstrated that they're energized and capable of fulfilling this role," of conserving the eagle, said Jeff Humphrey of the FWS.[211] So while the Arizona Game and Fish Department was leading the way for post-delisting conservation of the bald eagle, the CBD et al. offered no constructive or substantive help with this time consuming and at times difficult task. Instead, CBD et al. took the easy way out by sitting on the sidelines and carping.

Re-listing in Arizona

All of these reasons why the bald eagle was never going to be common in Arizona, why man-made dams and the introduction of non-native fish benefitted the eagle, and why the eagle was going to be well looked after by the state of Arizona and others after delisting occurred made no impression on the CBD et al. So the CBD et al. embarked on a quest to retain the bald eagle under the ESA.

Unfortunately, when the FWS delisted the bald eagle in July 2007, the CBD et al. did not see the light and realize the bald eagle in Arizona was going to be fine without the ESA. The CBD and fellow travelers finally got their wish granted in May 2008 when they won their lawsuit and the FWS was forced to re-list the bald eagle. The chronology of the eagle's re-listing

---

[207] Arizona Game and Fish Department, and Southwest Bald Eagle Management Committee. 2008.

[208] Arizona Game and Fish Department et al., We need Your help (brochure for pilots).

[209] Allison et al., 2008.

[210] Edwards, ND.

[211] Edwards, ND.

provides a sense of the litigants' determination and unreasonableness in the face of overwhelming evidence that the bald eagle's population in the lower 48 states was very secure, that the population in Arizona was larger and healthier than it had ever been historically, and that the population in Arizona was going to be well looked after by groups truly dedicated to actual conservation, not filing frivolous lawsuits.

Things got rolling in 2004 when the CBD and Maricopa Audubon, knowing that the FWS was preparing to delist the eagle, petitioned the FWS to up-list what they called "the desert nesting bald eagle" from threatened to the more imperiled status of endangered. The petition also sought to force the FWS to recognize these eagles as a "distinct population segment," which is a provision in the ESA by which the FWS can list a geographically isolated population of a species or sub-species even if the species or sub-species exists elsewhere in such numbers that it does not merit listing under the Act.[212]

The FWS did not respond in 90 days required so the CBD et al. sued. The CBD et al. and the FWS settled the suit by agreeing that the FWS would issue a finding on the uplisting petition by August 2006.[213] Meanwhile, in February 2006, the FWS proposed to delist the bald eagle in the lower 48 states.[214] In August, 2006 the FWS denied the petition to uplist much to the consternation of the petitioners.[215] This precipitated, in November 2006, a notice of intent to sue from CBD and Maricopa Audubon over the FWS's failure to uplist.[216] The litigants made no secret that the ultimate purpose of their lawsuit was not the bald eagle but to use the eagle as a tool to protect habitat. "We have already lost more than 90 percent of our riparian habitat in the Southwest. Removal of Endangered Species Act protection for the Desert Nesting Bald Eagle will ensure that we will lose much more," stated Robin Silver, Chairman of the CBD's board. "Ultimately, if we fail, we will lose our Desert Nesting Bald Eagles."[217] This last assertion was nonsense, to say nothing of immodest, as Arizona Game and Fish and others were, at the time,

[212] Center for Biological Diversity et al., 2004, p.21.

[213] Center for Biological Diversity and Maricopa Audubon Society v. Kempthorne 2007.

[214] U.S. Fish and Wildlife Service 2006a.

[215] U.S. Fish and Wildlife Service 2006f.

[216] Center for Biological Diversity 2006b.

[217] Center for Biological Diversity 2006a.

helping to conserve the eagle and ensure its ongoing viability. Others at the CBD echoed Silver's sentiment about land-use control. "It's a huge concern if the bald eagle is delisted that some of the best habitat would be lost very quickly to logging and other development," said Peter Galvin, co-founder of the group.[218]

The CBD and Maricopa Audubon sued the FWS in January 2007.[219] Once again, plaintiffs made no secret that the lawsuit's ultimate purpose was land and resource control. "Arizona is the fastest growing state in the nation," stated Witzeman of the Maricopa Audubon Society. "Urban sprawl is rapidly dewatering our fragile desert rivers. Arizona's unique eagle population needs more protection, not less."[220] Ironically, in their lawsuit the CBD et al. noted that the FWS had not met its statutory obligations under the ESA for responding to the initial uplisting petition in a timely manner. Yet when the FWS failed to issue a ruling on the 1999 proposed delisting in the one year time period required by the ESA, the CBD et al. did not object. With the lawsuit pending, the FWS delisted the eagle in July 2007.

In March 2008, the court ruled in favor of the plaintiffs. As a result, the FWS was forced to re-list the bald eagle in Arizona, and the agency had to conduct a twelve month status review of these eagles.[221] In response, in May 2008 the FWS did two things; relist the eagle[222], and initiate the twelve month status review.[223] The twelve month status review should have been completed in May 2009 but was not because the court granted CBD and Maricopa Audubon's desire for an extension until October 12, 2009 so that Native American tribes in Arizona could contribute information about how many bald eagles nested historically in the state.

The decision by CBD and Maricopa Audubon to bring the tribes into the process was based on the premise that the tribes' traditional knowledge would increase the number of eagles that existed historically. Yet this flew in the face of scientific knowledge about the eagle's population. Recall what Robert Ohmart of Arizona State University had to say on the historical

---

[218] Kay 2006.

[219] Center for Biological Diversity and Maricopa Audubon Society v. Kempthorne 2007.

[220] Center for Biological Diversity 2007f.

[221] Center for Biological Diversity v. Kempthorne. 2008.

[222] U.S. Fish and Wildlife Service 2008a.

[223] U.S. Fish and Wildlife Service 2008c.

population of bald eagles; "There were significant scientists in Arizona from the 1900s on. I'm damned sure they [bald eagles] weren't here." Given this, it seems that the Indian tribes were brought on board for one or more of three reasons. First, and most significantly, to increase the known historical population of eagles, through the use of the tribes' traditional (i.e., oral, not written) knowledge. In turn, this would have made the bald eagles' total population and population increase over the course of the eagle's tenure under the ESA appear much less significant, and therefore the eagle not merit delisting under the Act. Following this line of reasoning, if the population could potentially be much larger, based on historical data, then this would mean the eagle's current population was too small and could still grow and become more secure. Second, was to delay the delisting process. Third, was to try to lend credibility to the lawsuit because Native Americans and their traditional knowledge had a certain cache that some, such as the presiding judge, might have found appealing.

The plaintiffs made no secret that the first reason was primarily driving the inclusion of the Indian tribes. "Two facts speak loudly for a once greater DNBE [desert nesting bald eagle] population in pre-Anglo settlement times: (1) past availability of abundant and suitable habitat, and (2) ethnographic and anthropological evidence of significant historic DNBE presence." In addition, "DNBE must have been present but never documented. This lack of documentation lies with the failure of past DNBE researchers to interview Native American elders and scholars, and with the failure to review available ethnographic and anthropological evidence."[224] According to the Center for Biological Diversity, it "has conducted preliminary interviews and a cursory literature review. Even with this preliminary investigation, substantial evidence exists to conclude significant and once greater DNBE population in pre-Anglo settlement times."[225] All of this was extremely implausible, to say nothing of not being supported by the historical record, facts or reality.

As a result of the successful motion by the plaintiffs, the FWS had to incorporate traditional tribal knowledge into the twelve month status review. When the agency published the status review in February 2010, the much-touted traditional knowledge added a grand total of around five to ten nesting pairs to the historical population.[226]

---

[224] Center for Biological Diversity. 2006. Comments on proposed delisting of the bald eagle. June 19, 2006.

[225] Ibid.

[226] U.S. Fish and Wildlife Service 2010.

A larger problem with the use of the traditional knowledge is that its time frame stretched back around 150 years. Much in Arizona was different in the mid-1800s, but it was unrealistic and unreasonable to use that time frame as a guide to conservation 150 years later. Conditions back then, especially with regard to human development that affects eagle habitat, cannot be undone and the clock turned back to the mid-1800s. Furthermore, those touting traditional knowledge failed to acknowledge that human development, specifically the creation of dams, reservoirs and lakes and the introduction of non-native fish into these bodies of water, had resulted in the historical bald eagle population roughly doubling. Recall that historical research by raptor biologists found twenty-two nest sites. So even assuming that there was no overlap between the historical records and traditional knowledge—which is extremely unlikely but is being done in the interest of a conservative estimate—this means that the total historical population was around 27-32 pairs of bald eagles. This is roughly half number of pairs at the time of the lawsuit in the late 2000s (56 pairs in 2008).

In February, 2010 the FWS published the results of the status review which concluded that the bald eagle in Arizona was not a Distinct Population Segment, as defined under the ESA, and therefore did not warrant the Act's protection.[227] At the same time, the agency filed a request with the court that the eagle be delisted. Unsurprisingly, plaintiffs predicted doom with the usual hyperbole. "If the decision stands, it will be a death sentence for our desert nesting bald eagles," stated Robin Silver of the CBD. "We're anxious to get back into court to save these magnificent birds."[228] Utterly lost on people like Silver is that the bald eagle is helped, or otherwise conserved, by tangible actions in the field, not filing paper work and arguing in court.

In March 2010 the CBD et al. obtained documents they claimed demonstrated that FWS officials ignored expert opinion in their efforts to delist the bald eagle in Arizona. This was curious because not only did CBD et al. ignore scientific information and expert opinion, but one of the consistent tactics used by CBD et al. was to portray the FWS's decisions about the bald eagle in Arizona as a prime example of political meddling in the scientific process by anti-ESA Bush administration officials. So when the Obama administration took office in 2009, the CBD et al. expected it to be more sympathetic to their views on the bald eagle in Arizona because

---

[227] U.S. Fish and Wildlife Service 2010.

[228] Center for Biological Diversity 2010a.

CBD et al perceived Democrats and more pro-environment than Republicans.

Ironically, this is not what occurred, and the CBD et al. reacted like jilted lovers. "President Obama promised that his administration's decisions would be based on science," stated Herb Fibel, president of the Maricopa Audubon Society. "Department of Interior and Fish and Wildlife Service administrators have obviously not gotten the message."[229] Not surprisingly, Robin Silver of CBD took a particularly strident stand. "The science has not changed, but just as if Bush were still in office, political hacks in DC are trying once again to throw our eagles into the garbage for the benefit of their developer patrons," he railed. "We will not allow this to happen without an historic fight. We look forward to confronting these bullies in the courtroom and beyond."[230] CBD et al. had to wait until October when the court granted the FWS's request to delist the bald eagle. "The Obama administration's decision earlier this year was just as politically tainted as the Bush decision in 2007," according to Robin Silver. "We look forward to proving that in court in a suit we plan to file shortly."[231] CBD and Maricopa Audubon did just that on October 5 2010.

In addition to the CBD et al., the entire farce of trying to keep the bald eagle in Arizona on the endangered species list was aided and abetted by three other entities; directly by the judge presiding over the case, and indirectly by much of the media in Arizona, as well as an Arizona state legislator who tried to get the eagle listed as a protected species under Arizona law.

The most significant and direct role was played by the judge, Mary Murguia, who presided over much of the case. In her 2008 ruling that relisted the eagle, Murguia found that the FWS acted "arbitrarily and capriciously" because it appeared that the decision to deny the CBD's 2006 petition to uplist the eagle was based on political, not biological, considerations. Murguia's ruling, however, was unusual because she chose to defer more to the plaintiffs than to the federal government and its expertise on the bald eagle. This choice was apparently so remarkable that when Murguia was undergoing the hearing process to be confirmed (and promoted) from federal District Court judge to be a judge on the Ninth Circuit Court of Appeals, she was questioned on this by the Senate Judiciary Committee.[232] Had Murguia not given such deference and credence

[229] Center for Biological Diversity 2010b.

[230] Center for Biological Diversity 2010b.

[231] Center for Biological Diversity 2010c.

[232] Senate Judiciary Committee. Questions submitted to Mary Muguia.

to the largely spurious claims made by the plaintiffs, the lawsuit in all likelihood would not have proceeded and the entire farce to keep the bald eagle in Arizona listed under the Endangered Species Act would likely have been dealt a fatal and well deserved blow.

Another key role in keeping the Arizona bald eagle farce alive was coverage in the media that was sympathetic to those trying to keep the eagle listed. In particular the *Arizona Republic*, the state's largest and most influential newspaper, sided with plaintiffs.[233]

Finally, a state legislator in Arizona, Ed Ableser, helped keep the bald eagle farce going by introducing legislation, for three consecutive years starting in 2008, that would have created a state endangered species act for Arizona. One aspect of the law would be to designate the bald eagle as endangered through the year 2015. Not surprisingly, Ableser and his fellow travelers hinged the eagle's very existence of the passage of the bill. "This bill is the only hope they have left," asserted Ableser. "Without our protection, their habitats will be completely lost and so will their entire population." Such an immodest view of his abilities, in this case to prevent the bald eagle in Arizona from extinction, is likely one of the reasons why Ableser chose to be a politician. "The notion they may become extinct because we didn't help really scares me," he added, showing the type of false modesty that is also a hallmark of many politicians. Predictably, the usual suspects supported Ableser with their typical hyperbole. "This piece of legislation is everything," said Robin Silver of the CBD. "It's our last hope to protect our state's most visible and loved symbol from harm."[234]

Fortunately, Ableser's bill went nowhere because state officials took a more reasonable view of the bald eagle's status in Arizona. Prior to initially introducing his bill in 2008, Ableser tried to garner the support of Rep. Jerry Weiers, chairman of the committee with jurisdiction over wildlife. Weiers was nonplussed, pointing out that existing laws—the ESA and Bald and Golden Eagle Protection Act—already protected the eagle. "By mandating something that's already being done, other than spending more money, we're not really accomplishing anything," Weiers observed. In addition, at least one member of the Arizona Game and Fish Commission, the body appointed by the Governor that sets policy and establishes regulations and rules for the conservation and management of the state's wildlife that are implemented by the Department of

---

[233] Arizona Republic 2007.

[234] Harvey 2010.

Game and Fish, opposed the bill. Commissioner Jennifer Martin pointed out that Ableser's bill would harm efforts the Department of Game and Fish to reach out to landowners and cultivate productive and trusting relationships with the state so that wildlife can be more effectively conserved. "They won't even let us come on their property and survey anymore," if Ableser's bill is passed, stated Martin.[235] This observation cuts to heart of what is wrong with the approach advocated by the CBD et al., Ableser and embodied in the ESA. Both the CBD et al. and ESA are adversarial and needlessly drive wedges between landowners and wildlife. Landowners are the key to effective conservation, but unfortunately punitive approaches to wildlife conservation are detrimental by encouraging landowners to make their land inhospitable to wildlife and to cease cooperating with government wildlife agencies.

The efforts by the Center for Biological Diversity, Maricopa Audubon and others to keep the bald eagle in Arizona on the endangered species list had much less to do with eagle conservation than it did with politics, public relations and fundraising. If the Center and other eagle advocates truly wanted to conserve the eagle then, instead of putting their efforts and funds towards lawsuits and press releases, they would invest in actual on-the-ground eagle conservation. To date the Nestwatch Program has been the most effective conservation effort. The Center, which in 2009 had income of $7.5 million, and the local Audubon groups not only have considerable financial resources but also have access to many of the wealthy foundations that support wildlife conservation initiatives like Nestwatch. If the CBD and others wanted, they could easily raise much if not all of the money for the Nestwatch Program rather than spend limited funds on frivolous lawsuits. The bald eagle in Arizona is not going to be conserved by lawsuits, press releases or sound bites. It will be conserved by hard and patient field work, something the CBD and its fellow travelers have been averse to doing.

Chesapeake Bay

In contrast to the histrionics of those in Arizona, were the arguments put forth by opponents of delisting in the Chesapeake Bay region. Leading the charge against delisting was the College of William & Mary's Center for Conservation Biology (CCB). "Our main concern is the long term viability of the population," said Bryan Watts, Director of the CCB, when the FWS

[235] Coates 2008.

initially proposed in 1999 to delist the eagle. "It has been a spectacular recovery but it is clear that it is not at all secure in terms of habitat." And as a result, according to Watts, "de-listing is premature at this time because the Fish and Wildlife Service has made no attempt to access the current availability and the continued availability of breeding habitat. The second provision of the Fish and Wildlife recovery plan requires that habitat be protected for the current number of eagles in perpetuity. If we don't confront the issue we will be back to square one in 20 years."[236] Actually, the recovery plan stated, "Habitat protection efforts will focus on providing nesting habitat for 300-400 pairs…as well as associated roosting and foraging habitat for resident and migratory eagles."[237] When Watts made this statement in 1999, there were 504 pairs in Maryland and Virginia, the two states bordering Chesapeake Bay, which was well in excess of the 300-400 pairs Watts referenced as the number that ought to be the focus of conservation efforts.

Watts outlined these views in greater detail in a 20-page white paper published by the CCB in 1999 on the impending delisting of the eagle.[238] "The Chesapeake Bay bald eagle population is facing an unprecedented rate of habitat loss that is rapidly eroding carrying capacity," he stated. "The inevitable consequence of continued habitat loss is a reversal and decline in the population. Habitat protection goals set by the Chesapeake Bay Bald Eagle Recovery Plan as conditions of recovery have not been met or addressed."[239] Watts added, "One of the factors that has sustained population recovery has been the synergistic relationship between comprehensive monitoring, habitat protection, and inclusion of eagles in the federal permit process. Lifting the endangered species protection will effectively eliminate the legal mandate for all three of these activities. In the Chesapeake Bay, this will quickly lead to an acceleration in habitat loss and a corresponding reduction in carrying capacity."[240]

Underlying much of Watts's argument was a desire to control land-use, in this case by using the bald eagle and the ESA. "Since the elevation of the bald eagle to the federal threatened and endangered species list in 1978, The Endangered Species Act has been the single dominant

---

[236] Environmental News Network 1999.

[237] U.S. Fish and Wildlife Service 1990e, p.40.

[238] Watts 1999.

[239] Watts 1999, p.2.

[240] Watts 1999, p.2.

legal tool used to protect Chesapeake Bay eagles and their habitat."[241] Furthermore, Watts perceived an inevitable decline of the eagle without the protection of the ESA. "The true issue is that carrying capacity is being degraded by habitat loss and that once the population reaches carrying capacity it will not be maintained without some plan to identify and protect critical areas."[242]

Watts was not alone in his views on delisting. "Over the long run they'll be in jeopardy, because nothing will be protected except the nest and the bird itself," stated Mitchell Byrd of the CCB.[243] This alarmist sentiment hinged on a pinched view in which only punitive laws such as the ESA can ensure successful bald eagle conservation. When delisting occurred the bald eagle received marginally less protection under federal law than it had under the ESA because the FWS transferred much of the ESA's punitive power to the Bald and Golden Eagle Protection Act. In addition, it is very likely that states will step-up bald eagle conservation and protection efforts for the bald eagle after delisting occurs because the eagle is such a revered and charismatic species. Also, if people like Byrd are so committed to the cause of bald eagle conservation then they can apply their considerable energy and talents towards the cause of protecting habitat after delisting. Habitat conservation efforts can include a wide range of options, including raising funds with which to protect habitat, to approaching and working with private landowners and trying to convince them to conserve eagle habitat. Lastly, it was entirely likely that state legislatures in the Chesapeake Bay region would appropriate significant funding for post-delisting eagle conservation. The citizens of the Chesapeake Bay region and the legislatures of the states ringing the bay were known for their strong commitments conserving the bay and its wildlife. Legislators are always eager to fund feel-good projects that garner them favorable publicity, such as bald eagle conservation.

Mitchell Byrd was, however, far from a disinterested party in the issue of bald eagle conservation. He was a member of the recovery team for the Chesapeake Bay region since its inception in the early 1980s and was recovery team leader for the region from 1990 until delisting in 2007. In addition, Byrd made no secret of his affiliation with environmental pressure

---

[241] Watts 1999, p.12.

[242] Watts 1999, p.13.

[243] Canon 2002.

groups, as he claimed membership in groups that are among the strongest supporters of the ESA; the Sierra Club, National Audubon Society and Wilderness Society.[244] This is not to say that Byrd was guilty by association, but rather that he was a strong supporter of the ESA and the groups that lobbied for it. To a certain extent Byrd had a vested interest in keeping the bald eagle listed under the ESA. After all, once delisting occurred federal funding, including for recovery teams, would shrink markedly. And delisting would also mean that advocates of the ESA would lose some of the ability to use the Act as a land and resource use control tool.

Doubt should cast on the CCB's contention that the bald eagle population in the Chesapeake Bay region would likely decline substantially post-delisting for two reasons. First, a number of the states in the Chesapeake Bay region, most notably Maryland and Virginia, had in place land-use control measures that protect shoreline habitat. In 1984 the Maryland legislature enacted the Chesapeake Bay Critical Area Law, the purpose of which was to control development within 1000 feet of the state's bay shoreline. Some 70-80% of Maryland's bald eagle nests fall within the 1000 foot mark, and "Much of the forested areas within the Critical Area will be conserved (Therres, 4/19/04)," according to the FWS.[245] The person referred to by the FWS was Glen Therres, Associate Director of the Maryland Department of Natural Resource's Wildlife and Heritage Service, and in this capacity he was in charge of the state's endangered species program. Furthermore, since 1986 Therres was Maryland's lead bald eagle biologist. Given his position and responsibilities, Therres's assurance that bald eagle habitat in Maryland would be conserved after delisting was very credible. In addition, the Critical Area Law seeks to preserve and establish forested buffers 100 feet adjacent to tidal streams and landward of the mean high tide line, which is also prime bald eagle habitat.[246]

As for Virginia, it, in conjunction with the FWS, developed habitat protection guidelines for the bald eagle, which were last updated in 2000. The guidelines establish buffer zones around nest trees: a primary zone within the 750 foot radius, in which activity is very restricted; and a secondary zone, 750-1,320 feet from the nest that is not as restrictive as the primary

---

[244] Byrd 2005.

[245] U.S. Fish and Wildlife Service 2006a, p.8242.

[246] Code of Maryland 1986.

zone.[247] Also, both Maryland and Virginia protect the bald eagle under state endangered species laws.

The overall picture is that at the time of delisting in 2007 the bald eagle population in the Chesapeake Bay region was very healthy, increasing, and in all likelihood going to increase for the foreseeable future. In 2006, the FWS recognized this when it stated the Chesapeake Bay "bald eagle population is more than double the population goal [in the recovery plan] and continues to increase and has not yet reached carrying capacity—indicating that habitat is not a threat to the maintenance of the population goal for the foreseeable future."[248]

In addition, the CCB's involvement in the *introduction*, not reintroduction as most ESA proponents claim, of peregrine falcons to the coast of Virginia, an ecosystem in which the birds never nested historically, casts doubt on the center's commitment to conservation, most notably conservation of indigenous species and ecosystems. Environmental advocates like the CCB are typically against the introduction of species, meaning species that are not native to a given ecosystem, because of the damage such species can do. Yet in the case of the peregrine falcon in coastal Virginia, the CCB overlooked its apparent commitment to conserve ecosystems and native species due to its desire to jump on the peregrine bandwagon and garner contracts for monitoring the peregrines.

Peregrine apologists have tried to claim there are two historical records of peregrines nesting in the coastal salt marshes of the mid-Atlantic coastal region, but this was conclusively refuted by Eirik Blom the late contributing editor to *Birdwatcher's Digest* and one of the most respected bird experts on the East Coast.[249] Yet Watts and Byrd cited one of these discredited reports as justification for introducing captive-bred peregrines.[250] As of 2003, Virginia had 18 pairs of peregrines in the state's coastal region nesting on man-made structures, which were directly in the path that would be taken by migrating peregrines that fall.[251] Not only have introduced peregrines preyed on and harassed piping plovers, a species protected under the ESA,

---

[247] Virginia Department of Game and Inland Fisheries and the U.S. Fish and Wildlife Service. 2000.

[248] U.S. Fish and Wildlife Service 2006a, p.8243.

[249] Blom 1992, p.72; Blom 1993, p.70.

[250] Blom 1992, p.72; Blom 1993, p.70.

[251] Watts et al., 2003.

least terns, a declining species, but they have attacked, wounded and likely killed migrating peregrine falcons that, at the time, were protected under the ESA.

Even though the introduction of peregrines to the mid-Atlantic salt marshes was based on invalid data and, predictably, the introduced peregrines damaged the ecosystem, Watts and Byrd, along with the FWS and environmental pressure groups, seemed not to have been bothered by this. Perhaps one reason is the CCB was the recipient of federal and state contracts to help introduce and monitor these non-native peregrines (a more extensive examination of the introduction of peregrines is in the profile of the American peregrine falcon).

Pacific Northwest

When the FWS proposed in 1999 to delist the eagle, the objections submitted by a group of calling itself the "Bald Eagle Working Team for Oregon and Washington" centered around the same basic point made by those opposed to delisting in the Chesapeake Bay region; habitat loss is the greatest threat to the eagle, delisting would mean the loss of a powerful land-use control tool, therefore delisting would be detrimental to the eagle. The Working Team consisted of a number of state and federal biologists, including Robin Leighty of the U.S. Army Corps of Engineers, and Frank Isaacs of Oregon State University.

While the Working Team did reach consensus on whether the bald eagle should be delisted, the Team's critique constituted *defacto* opposition to delisting because its analysis consisted entirely of perceived problems with the FWS's delisting proposal. "The most significant concern of the Working Team is the current lack of long-term protection for bald eagle nesting, wintering, and foraging habitat," according to the Team.[252] Of particular concern to the Working Team was the large number of bald eagles on private lands. "Greater than 63 percent of all bald eagle nest sites in Washington are on private land," the Team stated. "In Oregon greater than one third are on private land. These nest sites would be at risk if the species were delisted."[253] The Working Team's solution was a variation of President H.W. Bush's no-net loss of wetlands pledge; "Should the [U.S. Fish and Wildlife] Service choose to delist the species, the Working Team recommends the Service assure no net loss of breeding habitat, bald

[252] Bald Eagle Working Team for Washington and Oregon 1999.

[253] Bald Eagle Working Team for Washington and Oregon 1999

eagle nest sites, and wintering habitat (including communal winter roosts) below what exists at the time of delisting."[254]

The other two specific concerns of the Working Team were that, "[a]t least two of the four goals identified in this *Recovery Plan* have not been met. The population goals have not been met in 80 percent of the management zones, and a stable or increasing wintering population has not been confirmed."[255] The recovery plan set the goal of approximately 514 pairs of eagles for Washington and Oregon.[256] As of 1999, when the Working Team submitted its concerns, there were at least 1,021 pairs of bald eagles in Washington and Oregon, almost double the recovery goal.

The reality is that in 1999 when the FWS published its delisting proposal, 76% of the management zones had achieved their recovery goals.[257] To make the fact that 24% of the zones had not achieved their recovery goals a point of contention when the bald eagle was so close to meeting the recovery plan's distributional requirement for management zones provides an indication that the Working Team was not looking at the bigger picture but nitpicking at technicalities. The bigger picture indicated that the bald eagle population in almost all of Oregon and Washington was very healthy and increasing. As for the issue of the wintering populations, by 2002 data showed that the wintering populations in each state had increased. From 1986-2000, Oregon's wintering population grew by 1.4%, and Washington's by 4.6%.[258]

Yet the failure to meet these two recovery goals as of 1999 was part of a larger problem according to the Working Team: "…the *Recovery Plan* was developed before adequate information on the species was available, and has never been revised. Consequently, the plan contains outdated and inappropriate recovery goals. Despite repeated requests and efforts by the Pacific States Recovery Team, the U.S. Fish and Wildlife Service (Service) has never supported this important and necessary effort. Basing the delisting of the bald eagle on an outdated *Recovery Plan* is inappropriate, and does not reflect the intent of the Endangered Species Act."[259]

---

[254] Bald Eagle Working Team for Washington and Oregon 1999.

[255] Bald Eagle Working Team for Washington and Oregon 1999.

[256] U.S. Fish and Wildlife Service 1986b, pp.29-30.

[257] U.S. Fish and Wildlife Service 1999e, p.36457.

[258] Steenhof et al., 2002, p.26.

[259] Bald Eagle Working Team for Washington and Oregon 1999.

This was a rather narrow view of how to evaluate the bald eagle's status. In 1999, at the time delisting was proposed, of the management zones that had attained their recovery goals, "at least 11 have more than doubled the established goal," according to the FWS.[260] Moreover, all indications were that the eagle's population was large and increasing.

As this example demonstrates, the Working Team only saw what it wanted to see. The Team failed to acknowledge that their contention the recovery goals were inappropriate was a two-sided coin. On one side was that some goals may have been set too low, in particular those for the overall population for the region and breeding success rate, which were met by 1990 and 1994, respectively. For example, around 1989 the recovery plan's goal for the total number of eagle pairs in Oregon and Washington was met. But on the other side of the coin—the fact that some of the goals had not been met, most notably those for nesting population distribution—may have indicated that these goals were set too high. Despite this, it was impossible to get around the simple fact that the bald eagle population in the Pacific region, especially in Washington and Oregon, had been, and would in all likelihood continue to be, large and healthy. This was an indication that concerns about meeting the minutia of the recovery plan were very likely unwarranted.

This same issue of not meeting every recovery goal was also raised followed the FWS's 1998 proposal to delist the American peregrine falcon. As with the peregrine, the logical thing to do in the case of the bald eagle was to look at other indices of the eagle's health, such as its overall population and whether the population was increasing or decreasing. When this is done for bald eagles in the Pacific Northwest around the time delisting was proposed, it becomes clear the population was healthy and merited delisting.

A troubling aspect of the Working Team was that in its letter to the FWS objecting to the proposed delisting of the bald eagle, the Team supported the absurd position of those opposed to delisting of the bald eagle in the Southwestern U.S. (i.e., Arizona). The Center for Biological Diversity, the leader of the southwest delisting opponents, returned the favor by lending support to the Working Team's position for the bald eagle in Oregon and Washington. "There are a lot more eagles than there were, there's no question about it, but that's way too simplistic a view to take of species recovery and the eagle recovery plans are a lot more complicated than that," said

---

[260] U.S. Fish and Wildlife Service 1999e, p.36457.

the CBD's Kieran Suckling. "They're [the Working Team] concerned with the distribution of the species not just what the numbers are." According to Suckling, the FWS needed to consider the "biogeography" of the bald eagle, meaning the spatial patterning of eagles in their habitat, rather than just look at raw numbers.[261] Given the Working Team's endorsement of the CBD's position, it seems very likely that the Team's stance was dictated more by activist members who were dismayed at the prospect of losing the eagle as a land-use control tool, as well as a means to secure research grants, than by concerns over the bald eagle's welfare.

As with other regions of the country, the dual issues of land-use control and funding appear to have been the overarching factors driving the Working Group's opposition to delisting. "If we don't have enough money to continue monitoring, and we don't have enough money to finish the planning processes we've started, we could start losing ground," asserted Frank Isaacs, senior faculty research assistant at Oregon State University and the coordinator of Oregon's annual bald eagle nest survey since 1978. "To me the future problem is the loss of habitat, because eagles are increasing, they're recolonizing some of their old places, but human populations are also still increasing, so those lines are gonna cross somewhere and somebody's gotta decide how many bald eagles we're going to have."[262]

South Carolina

As with the three other regions of the U.S. that had substantial opposition to the eagle's delisting, opposition to delisting in South Carolina was driven primarily by concern over decreased habitat protection. "You don't hardly go anywhere you don't see an eagle around," noted Tom Murphy, a biologist with the South Carolina Department of Natural Resources, in 2004. "Biologically, it's recovered to a point where it needs to be de-listed. Right now the timing is not great," due to development pressure on habitat.[263] Given that the bald eagle's population in South Carolina increased from 13 pairs in 1977 to 206 pairs in 2005, Murphy's claim about the "timing" of delisting was odd. However, like all those seeking to keep the bald eagle from being delisted, Murphy's objection to delisting was based primarily on the concern

---

[261] Christensen 2000.

[262] National Public Radio, Living on Earth. 1993. April 2, 1993. Accessed on the web <http://www.loe.org/archives/930402.htm> March 29, 2005.

[263] Petersen 2004.

that after delisting habitat would not be as secure because of the loss of the ESA's land-use control mechanisms. Joining Murphy in opposing to delisting were two members of a local Audubon society. "They faced borderline extinction, and I don't think we should be in a hurry to delist these birds," said Barry Lowes of the Hilton Head Audubon Society.[264] "I think it is premature to take the bald eagle off the endangered species list," stated Clem Dietz, also of Hilton Head Audubon.[265]

In South Carolina, all was not as bleak as portrayed by opponents of delisting. In 1997 state Representative Chip Limehouse sponsored a bill, that subsequently became law, which increased penalties for shooting a bald eagle from $100 to $500-$1,000, and prison sentences from thirty days to a maximum of one year.[266] "We still have very strict regulations in place," Limehouse said in 2004. Given that in 2004 it was clear the eagle's delisting was impending, Limehouse said that he was going to confer with those at the state Department of Natural Resources to determine if the eagle needed additional protections. "We'll try to determine what changes, if any, we need. We're going to be watching things closely to see if, in fact, changes in the federal law warrant that."[267] This sentiment in all likelihood is indicative of the commitment to bald eagle conservation not only in South Carolina but in most of the other states in the species' range.

PRESIDENTAL POLITICS AND DELISTING

Another factor that seems to have influenced the FWS and pressure groups as to whether they supported or opposed reclassifying the bald eagle under the ESA had to do with politics, specifically whether the President of the U.S. was a Democrat or Republican. To put this issue in context, it is necessary to go back to 1990 when the FWS first broached the idea of delisting the eagle with the publication in the Federal Register of the Advance Notice of a Proposal to Reclassify or Delist the Bald Eagle.[268] The Advance Notice was a trial balloon meant to assess

[264] McGuire 2004.

[265] McGuire 2004.

[266] Langley 1997.

[267] Petersen 2004.

[268] U.S. Fish and Wildlife Service 1990a.

support and opposition to reclassifying the eagle; either downlisting from endangered to the less-imperiled status of threatened, or even delisting entirely. One year after the publication of the Advance Notice, the FWS took no action even though the eagle population increased 13%, from 2,680 to 3,035 pairs.[269] It was not until 1994 when the FWS formally proposed to downlist the bald eagle that the agency provided some insight into why it did not act on the Advance Notice. Apparently, opposition from environmental pressure groups and some state wildlife agencies dissuaded the FWS from publishing a downlisting proposal prior to 1994, much less a proposal to delist.[270]

In 1995 the FWS went ahead and downlisted the bald eagle in those of the lower 48 states where it had been listed as endangered (it had been listed as threatened in Oregon, Washington, Minnesota, Wisconsin and Michigan due to the large and healthy populations in these states).[271] Almost without exception, environmental pressure groups supported downlisting and used the occasion to trumpet the eagle as an ESA success story. The next step in the eagle's saga occurred in 1999 when the proposed delisting of the eagle was announced at a huge ceremony on the lawn of the White House presided over by President Clinton. Again, pressure groups praised the ESA.

This chronology reveals a pattern that suggests a correlation between when these proposed and final changes to the bald eagle's status occurred and the political affiliation of the President at the time and the response from environmental pressure groups. In 1990, when the FWS published the Advance Notice, George Bush, Sr., a Republican, was President, someone pressure groups excoriated as anti-environment. Thus, these groups would have been loath to provide the Bush administration an opportunity to declare an environmental victory as would have occurred had downlisting or delisting been proposed in 1991 and then finalized in 1992.

When downlisting was proposed and finalized, in 1994 and 1995, and delisting proposed in 1999, however, Bill Clinton, a Democrat, was President, and pressure groups considered his Administration, especially Vice President Al Gore, a strong ally. Therefore, it is not surprising

---

[269] U.S. Fish and Wildlife Service. ND. Bald Eagle Pairs.

[270] U.S. Fish and Wildlife Service 1994e.

[271] U.S. Fish and Wildlife Service 1995e.

that pressure groups enthusiastically supported all three of these proposed and final changes to the bald eagle's status.

Pressure groups' stance vis-à-vis the 1999 proposed delisting is telling. One year after the proposed delisting, July 2000, the FWS was supposed to make a decision as mandated by the ESA but the agency published no notice of any such decision. Even though pressure groups embraced the 1999 proposal, they were curiously silent in 2000 even though delisting then would have provided a boost to the presidential campaign of their great friend and ally, Al Gore. Yet, as would eventually become apparent in the mid-2000s, pressure groups were seemingly more interested in keeping the bald eagle listed under the ESA, and then transferring the Act's land-use control provisions to the Bald and Golden Eagle Protection Act once delisting occurred, than they were with providing one of their friends a victory. It appears that objections from pressure groups helped derail the 1999 proposed delisting. Another possible reason for the FWS's failure to take action on the proposed delisting in the one year mandated by the ESA, and pressure groups' failure to object to this, was the desire to "save" the delisting of the bald eagle for their friend Al Gore when he hopefully became President in January 2001.

When Gore did not win the 2000 election, the FWS and pressure groups were only too happy to allow the eagle to remain listed out of a desire to deny an environmental victory to a Republican President, George Bush, Jr. Had not Ed Contoski—the landowner in Minnesota whose lawsuit during the Bush Jr. administration compelled the FWS finally to delist the eagle (see the section titled "Delisting in Name Only" for a more detailed discussion of this)—won his lawsuit it is entirely possible the FWS and pressure groups would not have pushed for delisting out of hope that the next President would be a Democrat. This prospect looked increasingly likely as Bush's popularity plummeted, primarily because of the disastrous Iraq war. When delisting on February 16, 2007 was imminent, due to the date imposed as a result of Contoski winning his case, pressure groups and the FWS took one last desperate action; claiming proposed changes to the Bald and Golden Eagle Act would not adequately protect the eagle after delisting occurred even though many of the ESA's punitive land-use provisions were going to be transferred to the Eagle Act.

ENVIRONMENTAL DEFENSE FUND AND DELISTING

Among environmental pressure groups, Environmental Defense Fund most strongly advocated delisting the bald eagle. At first glance, it would appear that Environmental Defense Fund's call for delisting was borne out of a genuine concern for the bald eagle's welfare and a desire to notch a victory for the ESA. In reality, the Fund was simply playing politics.

During the run-up to the eagle's delisting, the Environmental Defense Fund appeared to have taken a more levelheaded stance on the bald eagle's status than many other pressure groups. In May 2004 Environmental Defense Fund launched its "Back from the Brink" campaign, an effort to paint the ESA in a favorable light by highlighting the conservation of fifteen target species. The bald eagle served as the symbol of the campaign. But an examination of Back from the Brink, as well as Environmental Defense's stance on the ESA, reveals the campaign was as much, if not more, a cynical attempt to play politics as it was an honest effort to improve the Act.[272]

---

[272] Environmental Defense Fund's effort to delist the bald eagle would seem to be on the up-and-up because the group makes a number of valid points about the eagle's conservation. "[K]eeping bald eagles on the list would be like staying in the hospital forever once you're cured and you've recuperated...just in case. The ESA is meant to recover species, not provide lifelong nursing home care. Someone else needs that bed, and it seems to make more sense to go home, monitor your health, and return if your health declines, just as eagle populations will be monitored following delisting." (Environmental Defense Fund. ND. *Eagle FAQs*). Environmental Defense Fund also noted in reference to the eagle:

It would be unwise to keep on the endangered list plants and animals that are no longer endangered for at least two reasons. One, there are many much more imperiled species whose conservation needs have long been underfunded. Spending scarce conservation dollars complying with Endangered Species Act (ESA) procedures for wildlife that is not really endangered drains resources away from the species that truly need it. Two, if we keep species on the list long after they need the ESA's protection, the result will only fuel the perception that the act is a failure, unable to accomplish its goal of recovering species and getting them off the list. That perception already detrimentally affects Congress' willingness to appropriate funds for the Endangered Species Program. (Environmental Defense Fund. ND. *Eagle FAQs*)

All of these points are valid and based on sound reasoning which is why Environmental Defense Fund's campaign to delist the bald eagle would appear to be sincere. However, an examination of five factors—false statements made in support of the campaign, misleading statements, candid and accurate statements about the BGEPA, the timing of the campaign and its deeply political nature, and the group's history of ESA advocacy—cast doubt on the campaign.

FALSE STATEMENTS: In promoting the campaign, Environmental Defense Fund made a number of false and misleading statements. Compare statements made by Environmental Defense Fund in the "Claims of Success" section with the following claims made in the Back from the Brink campaign. "It's hard to imagine, but just a few decades ago we nearly lost our national symbol," is the opening line in Environmental Defense Fund's report on the bald eagle. "Americans began to realize that without strong action their national symbol would vanish forever." The eagle was, of course, never in danger of extinction, just extirpation in the lower 48 states. "The bald eagle's recovery is the most dramatic and symbolic endangered species success story," EDF claims.

Environmental Defense Fund has also made a number of false and misleading statements about the banning of DDT relative to

the bald eagle's resurgence:

Two conservation achievements brought the eagle back. First, after a series of legal actions brought by Environmental Defense (then the Environmental Defense Fund), the Environmental Protection Agency banned nearly all U.S. uses of DDT and related chemicals in 1972. As a result, chemical residue levels in fish dropped, and in the late 1970s and 1980s eagle numbers began climbing (Environmental Defense Fund 2004b).

Second, the bald eagle was listed under the Endangered Species Act (ESA). President Nixon signed the ESA at the end of 1972, and bald eagles below the 40th parallel were listed as a threatened species. Following 1973 and 1974 surveys that showed that populations continued to decline, FWS changed the eagle's status in 1978 to endangered in all continental states except Michigan, Minnesota, Oregon and Washington, where eagles were less rare and remained listed as threatened." (Environmental Defense Fund. 2004b).

There are several problems with these statements. One, the ESA was singed into law by Nixon in *1973*, not 1972, but this is probably due to a typo—after all we all make mistakes—rather than an attempt to give the ESA credit, albeit undeserved, for banning DDT. Two, as detailed above, in the section on the fact that the eagle was not protected north of 40º N. latitude under the ESA until 1978, the eagle's population in the lower 48 states was almost certainly not declining in 1973 and 1974. Three, is an attempt to link the DDT ban with passage of the ESA, as well as the failure to acknowledge the paramount importance of the DDT ban. "Thirty years after the Endangered Species Act made protecting America's wildlife a national concern, we can take heart in some dramatic recoveries, like the resurgence of the bald eagle and peregrine falcon, once threatened by DDT." (Environmental Defense Fund. 2004a)

MISLEADING STATEMENT: As part of the campaign's launch, Environmental Defense Fund released a report on the eagle that begins with the false claim that the bald eagle was faced with extinction. This is followed, a few lines later, and also in the introductory paragraph, by; "Americans began to realize that without strong action their national symbol would vanish forever." (Environmental Defense Fund 2004b). The eagle was, of course, never in danger of extinction, rather extirpation in the lower 48 states, because of the massive and healthy population in Alaska and British Columbia. The report, however, does not bother to mention this fact until a few later, and even then fails to mention eagles in British Columbia as well as that the great majority of the species exists there and Alaska. Environmental Defense Fund's use of the bald eagle as the symbol of the Back from the Brink Campaign looks more like a political gambit than a sincere effort to conserve endangered species.

CANDID AND ACCURATE STATEMENTS ABOUT THE BGEPA: When launching Back from the Brink, Environmental Defense Fund even prepared a question-and-answer document about delisting the bald eagle titled, *Why Delisting the Eagle Is a Good Thing for the Birds and the Endangered Species Act*, in which the following appeared:

Q: Once bald eagles are taken off the endangered list, what laws will protect them, how far will they protect them, and what will exist to punish people that hunt/harm them?

A: Even after being taken off the endangered species list, the bald eagle will remain protected by two federal laws, the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). In addition, in most states the eagle will be protected by one or more state laws as well. Regulations of the Fish & Wildlife Service under the Bald and Golden Eagle Protection Act prohibit acts that wound, kill, molest, or disturb eagles or their nests.

Q: Won't the numbers start going down when it eagles [*sic*] are delisted?

A: We expect eagle numbers to continue to increase, even after they are delisted. The principal threat that depressed eagle numbers historically was the pesticide DDT, with persecution by humans a distant second. DDT is no longer in use in the United States, and persecution is unlikely to resume because of the stiff penalties for doing it and because societal attitudes toward eagles and other birds of prey have changed dramatically from what they were decades ago.(Environmental Defense Fund. ND. *Eagle FAQs*)

Notice how no mention is made of the supposed need to transfer the ESA's habitat protection provisions to the BGEPA. When Environmental Defense Fund released this Q&A document in 2004, the FWS had not yet proposed to increase vastly the law's

land-use controls. Only in 2007, when Environmental Defense Fund saw the opportunity to garner media attention and score political points, did the group change its tune and suddenly "discover" that the proposed BGEPA/mini-ESA would be inadequate to protect the eagle. If the un-amended BGEPA was sufficient to protect the eagle in 2004 then surely the stronger amended BGEPA would be more than adequate in 2007. Even though Environmental Defense Fund knew full well the bald eagle would be in fine shape once it was delisted, such honesty about the bald eagle's prospects once delisted and the reasoned tone in which it was expressed, went out the window when EDF was faced with the bald eagle's imminent delisting in 2007, as evidenced by Michael Bean's comment on the supposed inadequacy of the proposed BGEPA.

CHERISHING THE ESA'S PUNITIVE PROVISIONS: Another reason to question the sincerity of the Back from the Brink campaign is that during the time period of the campaign, Environmental Defense Fund continued to cherish the ESA because of the Act's punitive land-use control provisions despite the group's efforts to portray itself as landowner friendly. Instead of rejoicing in response to the planned delisting of the bald eagle in February 2007, Michael Bean was focused on the loss of the ESA's punitive regulations. "I think it will fail to provide the level of protection that is needed to ensure the eagle doesn't sort of risk sliding back toward the more imperiled state it was in the past," said Bean of the proposed changes to the BGEPA (Biemer 2007). Bean's statement is also a telling indication of the commitment he had to making the ESA less onerous for private landowners. After all, the bald eagle is the mascot for Environmental Defense Fund's Back from the Brink campaign, the purpose of which is to chart a new, less-confrontational approach to the ESA, according to Environmental Defense Fund.

The vast majority of endangered wildlife in the U.S. is found on privately owned lands, where the landmark ESA prevents direct harm to species and ensures their habitats are protected but does little to encourage—and sometimes inadvertently discourages—the actions needed to recover them. In short, the law's defensive strategy has proved insufficient to bring species back from the brink. Thus, survival for most at-risk plants and animals rests in the hands of private landowners. The goal of our Back from the Brink campaign is to restore habitat for 15 endangered species and put them on the clear path toward recovery.(Environmental Defense Fund. ND. What is Back from the Brink)

Environmental Defense Fund also has this to say about Back from the Brink:

Most landowners want what's best for their land. As Texas rancher Rickey Fain puts it, "All landowners -- whether they have one acre or thousands -- have a passion for the land." Using this common ground between environmentalists and landowners, Environmental Defense Fund is partnering with farmers, ranchers, private forest landowners and other private landowners. Though the concept is simple, we are breaking new ground. Cooperation and collaboration between environmentalists and farmers and ranchers is still not the norm unfortunately. (Environmental Defense Fund. ND. Why Private Lands?)

Environmental Defense Fund also appeared to have translated this friendliness towards landowners into a new approach to the ESA. "There are only two reasons to consider changing the Endangered Species Act, at least if Congress remains committed to restoring endangered species," according to Michael Bean. "One is to make it more effective at conserving rare species; the other is to make it less onerous for those subject to its requirements." (Bean 2005, p.7)

At first glance, it would seem that Environmental Defense Fund was sincere about making the ESA landowner friendly. But when Bean's lofty sentiment about making the ESA less onerous is compared with his lamenting the prospect of losing the bald eagle as a land-use control tool, cracks appeared in Environmental Defense Fund's carefully constructed landowner friendly façade. Basically, Environmental Defense Fund was attempting to save the ESA by concealing the Act's massive perverse incentives with a sprinkling of financial incentives. The problem with the ESA is not a lack of incentives but rather crushing disincentives. Environmental Defense Fund has been able to strike up partnerships with various landowners, but it is likely most of them are not representative of most landowners, such as Ed Contoski, who have faced serious financial impacts from the ESA.

Environmental Defense Fund's Back from the Brink campaign and Center for Conservation Incentives are little more than efforts to cover the same old punitive ESA with a new veneer. In a document titled, "Campaign FAQs" (frequently asked questions), Environmental Defense Fund's Robert Bonnie had this to say:

Q: Why is the ESA such and important conservation tool?

Bonnie: The ESA is the most important conservation law in the world. There's just no other law like it anywhere. In a broad sense it has focused public attention and resources on the plight of many rare and endangered species. Its more tangible impacts

The timing of the kick-off of the "Back from the Brink" campaign reveals much about its political nature. "To launch the Back from the Brink campaign, Environmental Defense Fund is calling on President Bush to expedite the removal of the bald eagle from the endangered and threatened species list," the group proclaimed. "By delisting the eagle from threatened status and celebrating its recovery, the campaign hopes to promote more support for other species facing extinction."[273] Environmental Defense Fund's President, Fred Krupp, was even blunter; "The only thing standing between the bald eagle and its official recovery is a mandate from the president. President Bush can make history by completing a recovery effort that began more than 30 years ago."[274] Krupp also sent a letter to Bush urging him to push for the eagle's delisting.[275] Environmental Defense Fund even started an online petition to delist the bald eagle.[276] And the group claimed it would submit signed petitions to President Bush.[277] One year later, in 2005, Environmental Defense Fund issued another press release; "Species Still Waits For Bush To Delist," it stated. "It's time for the government to recognize this amazing conservation success, declare victory for the bald eagle and free up its limited resources for the 1,200 other endangered species whose fate is far less certain," said Michael Bean.[278]

Despite that the bald eagle should have been delisted in the mid-1990s, Environmental Defense Fund did not mount a campaign then calling for delisting, and a likely reason is that their friends Bill Clinton and Al Gore were the President and Vice President, respectively.

---

include taking a lot of species and putting them into the emergency room where many are doing better or are stabilized or are declining at a less rapid rate. (Environmental Defense Fund. ND. Campaign FAQs)

It is remarkable that Environmental Defense Fund can hold up the ESA as the world's most important conservation law when the group has gone to enormous lengths to point out problems with the Act, most notably the enormous damage to wildlife habitat caused by the ESA's punitive nature. Environmental Defense Fund cannot have it both ways. Either the ESA is fundamentally flawed, because it is onerous to landowners, or it is the best conservation law in the world. What distinguishes the ESA from its predecessors here in the U.S., as well as from most other laws around the world, is its ability to exert control over vast amounts of land and water that is deemed habitat for species listed under the Act. As is clear, above all else Environmental Defense Fund prizes the ESA's ability to control land and water use through its punitive provisions. Environmental Defense Fund's efforts to portray its position otherwise are cynical and misleading.

[273] Environmental Defense Fund 2004b.

[274] Environmental Defense Fund 2004c.

[275] Krupp 2004.

[276] Environmental Defense Fund 2004d.

[277] Environmental Defense Fund 2004e.

[278] Environmental Defense Fund 2005.

Environmental Defense Fund would not have dared to use the kind of in-your-face approach during the Clinton-Gore administration that it has used for the Back from the Brink Campaign. But with Bush Jr. in office, Environmental Defense Fund had no problem upbraiding the President for not delisting the eagle.

Another indication that Environmental Defense Fund is simply a highly partisan pressure group is that in December 2001 it launched a website titled, "Texas Environmental Profiles" that consisted of a searchable online database with which someone could obtain profiles for every Texas County of eight environmental indicators, such as air and water quality. The database also contained a fairly sophisticated mapping function, based on what is known as geographic information system software, or GIS, with which a user could construct maps of various spatial scales, from counties to the entire state, based on various environmental indicators.[279] The genesis of Texas Environmental Profiles was a project started by the Texas Center for Policy Studies (TCPS) in 1995. In December 2001 Environmental Defense Fund and the TCPS joined forces to put up the online database.[280] As with the Back from the Brink campaign, on its face the Texas Environmental Profiles project appeared to be a non-partisan, good government initiative. After all, a healthy democracy depends on transparency, one aspect of which is that citizens have the ability to obtain basic information about where they live.

An examination of a couple of factors associated with the Texas Environmental Profiles program reveal it to be remarkably similar to Back from the Brink. First, is when the Texas Environmental Profiles program was launched, which was just about a year after Bush took office. During the eight years Clinton was President, Environmental Defense Fund did not launch a similar, stand-alone website for Clinton's home state of Arkansas, where, like Bush, he was Governor prior to becoming President. While Environmental Defense Fund did launch a website called scorecard.org, which provided nationwide environmental data, including for Arkansas, it provided nowhere near the amount or sophistication of data as did Texas Environmental Profiles. Second, very soon after the launch of Texas Environmental Profiles, essentially the entire leadership of the Texas Environmental Policy Center—Mary Kelly, the Executive Director and Mary Sanger, Program Director—went to work for Environmental Defense Fund.

---

[279] Texas Environmental Profiles. ND.

[280] Texas Environmental Policy Center. ND.

After Bush left office and Barak Obama became President, the Texas Environmental Profiles website vanished. While the domain name, www.texasep.org, was still being held, there was no website to which it linked.

EXPERTS AND DELISTING

The bald eagle's status was so secure, and the case for delisting so strong, that in 1997 a number of the foremost raptor scientists in the U.S. took the unusual step of abandoning their usually reserved demeanor and publicly called for the eagle's delisting. "Some people ask why the *anatum* peregrine should be de-listed when the bald eagle (*Haliaeetus leucocephalus*), which exists in much larger numbers south of Canada than the peregrine does, was only down-listed to threatened," stated Tom Cade and Lloyd Kiff of the Peregrine Fund, James Enderson of Colorado College, and Clayton White of Brigham Young University. "Our answer is that the bald eagle should have been de-listed as originally proposed, but the Fish and Wildlife Service made a political decision to down-list when faced by opposition from litigious environmental groups."[281]

Opposition to delisting the bald eagle was very similar to what occurred with the *anatum*, or American, peregrine falcon. Pressure groups and researchers were reluctant to support delisting for the peregrine, which eventually occurred in 1999, and some even opposed it, in part because the falcon had been a funding gravy train. "But for many, success was a bitter pill," observed James Enderson about the peregrine's delisting. "Perhaps some people had too much at stake in terms of livelihood to let go of the blue falcon."[282] Commenting on the peregrine's impending recovery, in 1997 Bill Burnham of the Peregrine Fund said, "Others may not wish the peregrine de-listed because their careers and personal income depend on it remaining listed."[283] The observations of Enderson and Burnham are equally applicable to the bald eagle.

---

[281] Cade et al., 1997, p.735.

[282] Enderson 2005, p.197.

[283] Burnham 1997, p.221.

CONCLUSIONS ON DELAYED DELISTING

The ultimate goal of the ESA is to delist species like the bald eagle that merit delisting, not keep them listed under the Act indefinitely. Some of the ESA's supporters even admit this. "They are now more common than they were at the turn of the century. This is one of the big successes of this century," said Frank Gill, Senior Vice President for Science at the National Audubon Society. "The science supports the decision to de-list. It's very important for environmentalists to learn how to celebrate success and move on."[284] Even someone at the FWS agreed. "From a standpoint of public support and credibility, if there's no scientific justification for having species on the list, we do need to remove them," said Chris Tollefson, FWS spokesman.[285] Those who opposed delisting would have done well to heed Gill and Tollefson's advice. Instead, those who opposed delisting did so largely out of a desire not to lose the eagle as a land-use control tool, as well as a desire to keep the funding gravy train rolling.

DELISTING IN NAME ONLY

Even though the FWS delisted the bald eagle in 2007, the eagle was delisted in name only because the FWS, with the support of environmental pressure groups, transferred much of the ESA's land-use controls to the Bald and Golden Eagle Protection Act (BGEPA). This was remarkable because it essentially amended the BGEPA, which is something only Congress is allowed to do. Furthermore, this was a sad reminder that the FWS and its supporters were wedded to the type of adversarial and coercive approach to conservation that may well have done more harm than good to the bald eagle as well as other endangered species. In addition, America's landowners were once again made enemies, often unwittingly, of the bald eagle because, under the amended BGEPA, harboring an eagle can mean lost property value and lost use of property. A better approach for the FWS and pressure groups would have been to let the eagle fly free of the ESA and then to work cooperatively with landowners to conserve the eagle. This approach would have been better for the bald eagle because it would have been better for

[284] Borenstein 1999.

[285] Canon 2002.

landowners harboring eagles and eagle habitat. Private landowners are the key to conserving the bald eagle because most imperiled species, including the eagle, live on private land. But if harboring such species is a financial burden, due to laws' restrictive land-use controls that lower property values, then landowners will seek to make their property inhospitable to eagles.

The ostensible reason for the delay delisting the eagle, according to the FWS, was so the complexities of transferring the bald eagle off the list of endangered and threatened species could be resolved. According to Martin Miller, chief of the recovery section of the FWS's Division of Endangered Species, "nothing with the eagle is easy" because reconciling the ESA and federal laws that will protect the eagles after it is delisted "makes things tricky."[286] The real reason, however, for the delayed delisting was land-use control, specifically the FWS's desire to transfer much of the ESA's land-use control functions to the Bald and Golden Eagle Protection Act (BGEPA).

To understand how the FWS amended the BGEPA and why the bald eagle should have been delisted at least in February 2007, not July 2007, it is necessary to go back to 1999, when the FWS first proposed to delist the bald eagle in the entire lower 48 states.[287] Under the ESA, the FWS has one year to make decisions about proposed rules. When July 2000 rolled around, however, the FWS took no action on its proposal. The agency was content to keep the bald eagle listed, and one of the most likely reasons was that the agency was unwilling to part with its best public relations tool. In addition, the eagle had been used by the FWS to control land-use, the agency's preferred method of implementing the ESA.

LANDOWNER SUES TO COMPEL DELISTING

Then something unexpected happened in October 2005. A landowner named Ed Contoski sued the FWS for failing to make a decision on the 1999 proposed delisting in the one year time period mandated by the ESA. Ed Contoski was co-owner, along with relatives, of 18 acres along Sullivan Lake in central Minnesota, about 100 miles north of his home in the Twin Cities. To provide for his retirement, and because heart problems prevented him from using and

[286] Canon 2002.

[287] U.S. Fish and Wildlife Service 1999e.

enjoying the property, Ed decided in 2004, at the age of 67, to sell his half interest to family members. In order to raise the $425,000 needed to purchase Ed's half-share, the only financially feasible plan was for the northern 7.33 acres of the property to be platted for five residential lots. The remainder of the property would not yield the necessary cash for several reasons, including; development was prohibited on about half of the 18 acres because it was designated as wetlands under the federal Clean Water Act, and access restrictions to the lake, as well as for a new road that would have to be cut, significantly reduced the value of the property's southern portion.[288]

Then the ESA shoe dropped in the fall of 2004 when authorities informed Ed they would not approve his plan due to the presence of a bald eagle nest, which precluded development of all of the 7.33 acres. Mr. Contoski was informed that all development within a 330 foot radius of the eagles' nest tree, which was on one of the lots, should be avoided and that human activity within a 330-660 foot radius should be very limited.[289] Faced with the prospect of a $100,000 fine and/or one year in jail for violating the ESA should harm come to one eagle, an egg or even habitat—penalties that would double, triple, and so on for any combination of adult eagles, eggs, chicks, as well as habitat—Ed had no choice but to abandon his plans.

In an effort to recover use of his land, Ed Contoski enlisted the help of the Pacific Legal Foundation, who filed suit on his behalf against the Interior Department in October 2005 for failure to make a decision whether to delist the eagle.[290] Interior was in no hurry to delist because, as the Contoski case demonstrated, the eagle was an effective land-use control tool. Ed Contoski won the case in August 2006, and as a result the court ordered the FWS to delist the bald eagle no later than February 16, 2007.[291] "The bottom line is the delisting has been working its way through the process for a long time. Give him credit for getting a deadline imposed," stated John Kostyack of the National Wildlife Federation in response to the court ordered delisting.[292] Yet if large, powerful and wealthy groups like the Federation had truly wanted to get the eagle delisted, they easily could have brought a lawsuit years prior to 2007 to compel the FWS to do so.

---

[288] Contoski 2006a.

[289] North 2004.

[290] Contoski 2005.

[291] Contoski 2006b.

[292] Slevin 2006.

REWRITING THE BGEPA

Prior to the August 2006 court decision, as the case was winding its way through the court system, the FWS realized that the jig might be up, that it might lose the case and therefore the ability to club landowners like Ed Contoski with the ESA. So the FWS did two things. First, it issued a second proposed delisting in February 2006, some six-and-a-half years after the initial proposal.[293] Second, on the same day it reissued the second proposed delisting, the FWS issued its proposed interpretation of the Bald and Golden Eagle Protection Act (BGEPA) in order to transfer as much of the ESA's land-use control provisions as possible to the BGEPA.[294]

Congress passed the Bald Eagle Protection Act in 1940 out of concern that the bald eagle was "threatened with extinction" due in large part to direct persecution, primarily shooting.[295] To address this, the Eagle Act made it illegal, except in Alaska, to "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or in any manner, any bald eagle, commonly known as the American eagle, alive or dead, or any part, nest, or egg thereof." The term "take" was defined as "pursue, shoot, shoot at, wound, kill, capture, trap collect, or otherwise willfully molest or disturb." Anyone guilty of violating the act could be subject to a $500 fine or 6 months prison. Those with permission from the Interior Department, such as researchers, could take a very limited number of eagles.[296] Congress amended the Act in 1959 to add Alaska, which had been granted statehood in 1958.[297] Congress again amended the Act in 1962 to cover golden eagles, because immature bald eagles can be mistaken for golden eagles—at which point the law became the BGEPA—and exempted Native Americans from possessing eagle parts.[298] In 1972 Congress added the term "poison" to the definition of "take" and increased penalties to $5,000 and one year in jail for a first offense, and $10,000 and two

[293] U.S. Fish and Wildlfie Service 2006a.

[294] U.S. Fish and Wildlife Service 2006b.

[295] Bald Eagle Protection Act of 1940.

[296] Bald Eagle Protection Act of 1940.

[297]Bald Eagle Protection Act of 1959.

[298] Bald and Golden Eagle Protection Act of 1962.

years in jail for a second offense.[299] As the definition of take makes clear, the BGEPA's prohibitions addressed actions that were direct and proximate to eagles.

One telling indication that Congress never intended for the BGEPA to control land-use comes from Michael Bean of the Environmental Defense Fund, the person widely regarded as the foremost expert on not only the ESA but U.S. wildlife law as well. In the first two editions of his treatise on U.S. wildlife law, *The Evolution of National Wildlife Law*, published in 1977 and 1983, respectively, Bean makes no mention of the BGEPA having any land-use control provision.[300] If the law contained such a provision then Bean certainly would have mentioned it because it would have been of overwhelming importance in terms of the BGEPA, the ESA, and the conservation of the bald eagle. It was more than two decades later, however, when the FWS proposed to delist the eagle, that Bean suddenly came to a novel interpretation of the BGEPA by "discovering" the Act's land-use control provisions.

The FWS realized that BGEPA's prohibitions on taking eagles limited the geographic and regulatory scope of the Act so the agency created a massive expansion of the law's prohibitions to encompass indirect and remote actions that might alter eagle habitat. Instead of amending the BGEPA, the FWS could have simply done for the bald eagle what it did in the case of other delisted species, such as the American peregrine falcon; delist the eagle and then monitor it for a number of years to ensure its continued health. And the FWS could have opted to leave the BGEPA as it was. But because the FWS wanted to do something very much more ambitious—transfer as much of the ESA's land-use control provisions as possible to the BGEPA—it had to embark on a very complex process of issuing proposed and final rules in the Federal Register, a proposed and final Environmental Assessment (as required under the National Environmental Policy Act), and proposed and final guidelines for how to comply with the new rules. It took the FWS over three-and-a-half years to issue all the proposed and final documents necessary for this baroque process to run its course.

Things got rolling in February 2006 when the agency made the following initial proposal to change the BGEPA's definition of disturb:

---

[299] Bald and Golden Eagle Protection Act of 1972.

[300] Bean 1977, pp.92-102; Bean 1983, pp.89-98.

> To agitate or bother a bald or golden eagle to the degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causing injury, death, or nest abandonment." In addition to immediate impacts, this definition encompasses impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits and causes injury, death, or nest abandonment. This definition is consistent with how "disturb" has been interpreted in the past by the Service and other Federal and State wildlife and land management agencies.
>
> The definition is intended to cover situations where the interference or interruption of an eagle's breeding, feeding, or sheltering habits causes injury or death not just to themselves, but more typically to other eagles: the juveniles or eggs. For example: if adult eagles are repeatedly flushed from a nest, their young may overheat and die, or their eggs may cool too much and fail to hatch.[301]

Then, in December 2006, the FWS amended this definition with the release of the Draft Environmental Assessment (EA) for the proposed change to "disturb" under the BGEPA. In the draft EA, the FWS proposed to make the definition of disturb, even more restrictive:

> The revised definition would read: "Disturb means to agitate or bother a bald or golden eagle to the degree that causes (i) injury or death to an eagle (including chicks and eggs) due to interference with breeding, feeding, or sheltering behavior, or (ii) nest abandonment." Injury would be defined as "a wound or other physical harm, including a loss of biological fitness significant enough to pose a discernible risk to an eagle's survival or productivity."[302]

In June 2007, the FWS issued the final definition of disturb, which turned out to be yet more restrictive than the previous one in the draft EA.

> Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.[303]

---

[301] U.S. Fish and Wildlief Service 2006b, p.8266.

[302] U.S. Fish and Wildlife Service 2006i, p.8.

[303] U.S. Fish and Wildlife Service 2007c, p.31132.

The key difference in the final definition is the phrase "is likely to cause," which constitutes a significant expansion of what could potentially disturb an eagle. After all, many things are likely to disturb an eagle. The definition of the term "likely" is in the eye of the beholder, just as is the term ecosystem. In the case of bald eagle, the FWS will be arbiter of what is considered likely, and given the agency's well established track record using the ESA to club landowners, it is very likely the FWS will do the same with BGEPA. Another difference in the final definition of disturb is that the word "death" was removed since "injury is a broader term than 'death' and encompasses injury that results in death," states the FWS.[304] According to the FWS, "The definition [of disturb] was reworded from the preferred alternative in the DEA to address concerns expressed about enforceability and predictability…Many commenters, including numerous state wildlife agencies and our own Office of Law Enforcement, encouraged us to incorporate a 'likelihood' clause for purposes of predictability and enforceability."[305]

In order to put the issue of the definition of disturb under the BGEPA in perspective, it is necessary to understand the similarities between it and how the FWS has used the ESA to restrict land use. The aspect of the ESA that makes it such a powerful law is its ability to control use of land and water. And the teeth that give the ESA this power is the law's prohibition on people taking listed species. The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[306] All of the terms have clear meanings, but for "harm," which the FWS defined in 1981 as "an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."[307]

Harm by habitat modification, as it came to be known, has provided the FWS with the ability to regulate not only habitat near a listed species but also habitat farther away that might possibly be used for other activities such as resting or foraging. In addition, harm by habitat modification has also been used by the FWS to encompass habitat that is of a suitable type but

---

[304] U.S. Fish and Wildlife Service 2007c, p.31133.

[305] U.S. Fish and Wildlife Service 2007c, p.31132.

[306] Endangered Species Act of 1973, sec. 3(19).

[307] U.S. Fish and Wildlife Service 1981b.

not even occupied by a protected species. The upshot is that through the 1988 redefinition of harm the ESA has had the ability to regulate vast amounts of land and water, especially in the case of a species like the bald eagle that uses enormous swaths of terrestrial and aquatic habitat.

When the ESA's definition of "harm" is compared with the BGEPA's definition of "disturb," the parallels are striking. Both use very similar terminology, in some instances identical, to accomplish the goal of restricting use of land and water. The FWS essentially did a copy-and-paste job by transferring the ESA's definition of harm to the BGEPA's definition of disturb. It is not hard to imagine how the proposed definition of disturb under the BGEPA could be used much like the ESA's definition of harm to encumber huge amounts of habitat, especially because the bald eagle's population continues to grow. Furthermore, the proposed definition of disturb represents such an enormous expansion of the regulatory reach of the BGEPA that it is tantamount to rewriting the law, something that would seem to necessitate Congressional approval because federal agencies are only supposed to interpret laws, not rewrite them.

While the FWS was in the process of transferring the ESA's land-use controls to the BGEPA, most of the ESA's prominent proponents seemed to be aware of what was afoot. "The Fish and Wildlife Service is revising the Bald and Golden Eagle Act to include better habitat protections, but eagles will remain a threatened species until the Act is *amended* [emphasis added]," admitted the Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Endangered Species Coalition, Natural Resources Defense Council, National Wildlife Federation, and U.S. PIRG in 2004.[308]

DIFFERENCES BETWEEN ESA and BGEPA

While the ESA's definition of harm was essentially transferred to the BGEPA, there are some important differences between the two laws. There are several provisions of the BGEPA that make it more limited in its regulatory reach than the ESA. First, under the BGEPA federal agencies will not have to consult with the FWS if their actions will potentially harm or disturb bald eagles. Second, the BGEPA does not allow citizens to sue other citizens for not obeying the Act, as can occur under the ESA. Third, under the ESA there is a provision that allows citizens

[308] American Rivers et al., 2003e.

to bring lawsuits against the federal government for failure to enforce the ESA. It appears there is no such provision for the BGEPA.[309]

IMPLEMENTING THE BGEPA

There are a number of ways to gain an understanding of how the FWS will most likely use the new BGEPA's land-use control provisions; expert opinion, the FWS's guidelines for complying with the BGEPA, the FWS's permitting program under the BGEPA, extrapolation, and how the FWS implemented the ESA.

EXPERT OPINION

Those with knowledge of bald eagle conservation are aware that much of the ESA's land-use controls have been transferred to the BGEPA. "[I]t appears that the allowance for 'take' under the BGEPA may be more restrictive than what was allowed for under the ESA," stated the Arizona Game & Fish Department."[310] Arizona Game & Fish also noted that the BGEPA and ESA were functionally very similar. "From the perspective of a field biologist, the transition to protection by the BGEPA continues to provide federal regulation related to "take," requires a federal permit for management activities in either scenario, and both laws allow for continued Department oversight of bald eagle management activities."[311] The Washington Department of Transportation had a similar take; "Many actions that were considered likely to incidentally "take" bald eagles (from harassment, harm or habitat alterations) under the Endangered Species Act would fall under the definition of disturb in the Eagle Act."[312] According to the FWS, "Many actions that are considered likely to incidentally take (harm or harass) eagles under the ESA will also disturb or otherwise take eagles under the Eagle Act. Until now, there was no regulatory mechanism in place under the Eagle Act to permit take of bald or golden eagles comparable to incidental take permits under the ESA."[313]

---

[309] Alexander 2007.

[310] Arizona Game & Fish Department. ND. *Common Questions*.

[311] Arizona Game & Fish Department. ND. *Common Questions*.

[312] Washington Department of Transportation. ND.

[313] U.S. Fish and Wildlife Service 2009b, p.46837.

BGEPA GUIDELINES

Further evidence of the similarities between the ESA and the amended BGEPA can be seen in FWS guidelines to protect nesting eagles. In order to let landowners know how to comply with the new BGEPA, the FWS released the National Bald Eagle Management Guidelines in 2007. The Guidelines lay out very specific buffer zones around eagle nests, and other habitat, that are similar to those employed by the FWS for implanting the ESA. The 1983 Northern States bald eagle recovery plan established a three-tier buffer around nests: the primary zone, in which virtually no activity was permitted, within 330 feet; the secondary zone 330-660 feet from the nest in which more activity was allowed; and the tertiary zone, at least 660 feet-¼ mile, that was the least restrictive.[314]

The Guidelines for the BGEPA are virtually identical to those in the Northern States recovery plan. For building construction of 1-2 stories, road construction, new or expanded agricultural operations, installation of docks or moorings, and a host of other activities, the Guidelines recommend a buffer of 660 feet if the activity is going to be visible from a nest, and 330 feet if it is not. Note how the buffer zones in the Guidelines, the Northern States Recovery Plan, and those with which Ed Contoski was threatened are identical. In the case of more significant activities—construction of buildings with three stories or more, mining, oil and gas drilling, construction with a footprint larger than ½ acre—the Guidelines recommend a 660 foot buffer at all times. Other activities—timber operations and forestry, off-road vehicle use, motorized watercraft use, non-motorized watercraft and humans on foot—have recommended buffer zones of 330 or 660 feet. Helicopters and fixed-wing aircraft are to keep a 1,000 foot buffer, and blasting and other loud, intermittent noises are to maintain a buffer of at least ½ mile, which increases to one mile in open terrain. Cutting of mature trees and other old growth trees ½ mile or less from water used by eagles is to be avoided.[315] Even if a nest is blown down or otherwise destroyed, landowners are advised to wait three more breeding seasons before undertaking any development within a buffer zone because eagles may try to rebuild the nest.[316]

---

[314] U.S. Fish and Wildlife Service 1983h, pp.E3-E5.

[315] U.S. Fish and Wildlife Service. 2007e, pp.12-14.

[316] U.S. Fish and Wildlife Service. 2007e, p.15.

PERMITTING "TAKE" UNDER THE BGEPA

While the redefinition of "disturb" is the statutory means by which the FWS transferred most of the ESA's restrictions to the BGEPA, the agency's permit program is the mechanism by which the redefinition is going to be implemented. Essentially, the permit program is a means by which landowners engaging in otherwise legal use of their land, such as cutting timber, plowing fields, and building a house, can obtain permits to take eagles, or habitat, that will exempt them from the Eagle Act. The FWS created two permit processes; one for those who already have a take permit under the ESA, and one for those who don't. At first, it may seem counterintuitive that the FWS is offering people a way out of the new Eagle Act's prohibition on taking eagles because, after all, this is what the law is supposed to prohibit. But, as with the BGEPA's new definition of disturb, it necessary to look to the Endangered Species Act to understand the proposed permit program.

In 1982 Congress amended the ESA to allow species to be taken incidentally during the course of otherwise legal activities on private lands. Congress did so because until the 1982 amendment there was no way, short of Congressional intervention on a case-by-case basis, for any exemptions to the ESA's ironclad prohibition on taking species listed under the Act. After the landmark Supreme Court case, *TVA v. Hill*—in which the snail darter, a two inch species of fish, halted construction of a major dam on the Tennessee River because the FWS found that the dam would have resulted in harm to the darter—Congress and the American people suddenly became aware of the sweeping powers of the Species Act. In response, Congress amended the Act in 1978 by creating the "God Squad"—which consists of the Secretaries of the Interior, Agriculture and Army, the Administrators of the EPA and NOAA, the Chairman of the Council of Economic Advisors, and a representative from the state in which the project occurs—to provide exemptions from the Act for federal projects. Not surprisingly, the God Squad gave the green light for Tennessee River dam.

While the creation of the God Squad was welcome news for the federal government, it did nothing to help private landowners. So in 1982 Congress amended the ESA to add Section 10, which authorized the federal government to issue permission for landowners to take species incidentally in the course of an otherwise legal activity such as logging, house construction or farming. In exchange for such permission, known as an Incidental Take Permit, landowners had

to provide mitigation in the form of land and/or money. This process became formalized through the amended ESA's provision for Habitat Conservation Plans; FWS approved documents that lay out the process by which permittees will mitigate the effects of their activities.

BGEPA TAKE PERMITS

There are two permit processes the FWS created under the BGEPA, both of which provide further indications that the new BGEPA has been turned into a mini, bald eagle specific version of the ESA. One permitting process is for grandfathering into the BGEPA those Incidental Take Permits already issued under the ESA prior to the BGEPA's amendment. The second permit process is for new activities that will take bald eagles under the BGEPA.

GRANDFATHERING EXISTING ESA PERMITS: Even though the FWS delisted the eagle in July 2007, the agency took more than a year to issue the first of two regulations for how the BGEPA's new definition of "disturb" would be applied through a system of permits. But instead of issuing the entire regulation, the FWS only finalized the regulations for the permit system for those who already had been granted take permits under the ESA; in effect grandfathering existing ESA take permits.[317] "Eagle take that was prohibited under the ESA is, in many instances, also prohibited under the Eagle Act," stated the FWS. "Both statutes define take to prohibit killing, wounding, pursuing, shooting, capturing, and collecting the species they protect (16 U.S.C. 668c; 16 U.S.C. 1532(19)). In addition, the ESA definition of ''take" includes the terms ''harm'' and ''harass,'' while the Eagle Act includes ''molest or disturb" While the regulatory definitions of ''harm,'' ''harass,'' and ''disturb'' differ, they do overlap in several ways, with the result that an action considered likely to incidentally take eagles under the ESA may also take eagles under the Eagle Act.[318]

NEW BGEPA PERMITS SIMILAR TO ESA PERMITS: In September, 2009 the FWS finally issued regulations for how it would issue permits under the BGEPA for the take of eagles that had not previously been covered under the ESA. Given that it took the agency so long to

[317] U.S. Fish and Wildlife Service 2008b.

[318] U.S. Fish and Wildlife Service 2008b, p.29076.

delist the eagle, it is not surprising it took over two years after the eagle's delisting for the FWS take this final step. The BGEPA permit system for taking eagles is essentially a mini version of the ESA's incidental take permit system. "Many actions that are considered likely to incidentally take (harm or harass) eagles under the ESA will also disturb or otherwise take eagles under the Eagle Act," admits the FWS. "Until now, there was no regulatory mechanism in place under the Eagle Act to permit take of bald or golden eagles comparable to incidental take permits under the ESA."[319] The FWS claims:

> "The typical permit-application process will be less burdensome for the applicant than the permit process under the ESA, since an HCP is not required. Preparing an HCP can be time consuming and is usually delegated to a professional consultant. HCPs often cover large geographic areas—some larger than a million acres—and set forth terms and mitigation measures designed to protect species for up to 100 years. In contrast, the information required to apply for an individual Eagle Act permit does not include an extensive habitat analysis, is easier to compile, and will require less information, since permits will be valid for no more than five years."[320]

This, however, is very implausible. An examination of the permitting process under the BGEPA for take of eagles reveals it to be very burdensome and complex, including the requirement to provide: "Maps and digital photographs of the eagle nests, foraging areas, and concentration sites where eagles are likely to be disturbed by the proposed activity (including the geographic coordinates of the activity area and important eagle-use area(s) and the distance(s) between those areas)"; and "the nature and extent of existing activities in the vicinity that are similar to the proposed activity, and the distance between those activities and the important eagle-use area(s)."[321] The FWS's requirements for the take of nests are virtually identical.[322] The

---

[319] U.S. Fish and Wildlife Service 2009b, p.46837.

[320] U.S. Fish and Wildlife Service 2009b, p.46837.

[321]

1. A detailed description of the activity that will cause the disturbance or other take of eagles
2. The species and number of eagles that will be taken and the likely form of that take
3. Maps and digital photographs that depict the locations of the proposed activity, including the area where eagles are likely to be taken
4. For activities that are likely to disturb eagles (versus other take)

operative term is "important eagle-use area" which the FWS defines as, "an eagle nest, foraging area, or communal roost site that eagles rely on for breeding, sheltering, or feeding, and the landscape features surrounding such nest, foraging area, or roost site that are essential for the continued viability of the site for breeding, feeding, or sheltering eagles."[323] Another key term found throughout the permit program is "territory" and the FWS defines it as, ''a defended area that contains, or historically contained, one or more nests within the home range of a mated pair of eagles.''[324]

---

a. Maps and digital photographs of the eagle nests, foraging areas, and concentration sites where eagles are likely to be disturbed by the proposed activity (including the geographic coordinates of the activity area and important eagle-use area(s) and the distance(s) between those areas)
b. Whether or not the important eagle use area(s) is visible from the activity area, or if screening vegetation or topography blocks the view; and
c. The nature and extent of existing activities in the vicinity that are similar to the proposed activity, and the distance between those activities and the important eagle-use area(s);
5. The date the activity will start and is projected to end;
6. An explanation of what interests(s) in a particular locality will be protected by the take, including any anticipated benefits to the applicant or to the public;
7. An explanation of why avoiding the take is not practicable, including at a minimum, a description of why take cannot be avoided after taking into consideration, relative to the magnitude of the impacts to eagles: (1) the cost of the remedy comparative with proponent resources; (2) existing technology; and (3) logistics in light of overall project purposes; or
8. For programmatic take, why take is unavoidable; and
9. A description of measures proposed to offset the detrimental impact of the proposed activity on the regional eagle population.(U.S. Fish and Wildlife Service 2009b, p.46843)

[322] "The current application form we will use for this regulation requires applicants to submit the following information:

1. The number of nests proposed to be taken, whether the nest(s) is a bald eagle or golden eagle nest, and whether the nest(s) is active or inactive; and if known, whether it has been active in the 5 preceding breeding seasons.
2. Why the removal of the nest(s) is necessary, including the interest to be served in a particular locality
3. A description of the property, including maps and digital photographs that show the location of the nest in relation to buildings, infrastructure, and human activities;
4. The location of the property, including latitude and longitude;
5. The length of time for which the permit is requested, including beginning and ending dates;
6. A statement indicating the intended disposition of the nest(s), and if active, the nestlings or eggs;
7. A calculation of the bald eagle or golden eagle area nesting population, including an appropriately-scaled map or plat showing the location of each eagle nest used to calculate the area nesting population unless the Service has sufficient data to independently calculate the area nesting population. (Not applicable for immediate safety emergencies.)
8. A description of the avoidance, minimization, and mitigation measures the applicant proposes to reduce take and offset the detrimental impact of the permitted activity. (Not applicable for immediate safety emergencies.) Even though the application form does not require applicants to describe proposed mitigation measures in cases of safety emergencies, we may require compensatory mitigation as a permit condition if appropriate to offset the detrimental impacts to eagles" (U.S. Fish and Wildlife Service 2009b, p.46846).

[323] U.S. Fish and Wildlife Service 2009b, p.46846.

[324] U.S. Fish and Wildlife Service 2009b, p.46846.

In addition, in order to comply with the permit regulations the FWS considers it adequate if applicants provide information about the bald eagle's habitat within a 10 mile radius around a nest.[325]

APPLYING GUIDELINES

A better sense of how much land will be encumbered by the BGEPA and how onerous the permit process will be can be gained by applying FWS nest protection guidelines under the Eagle Act and other habitat parameters.

The amount of land contained in all three of these requirements is astounding and gives a sense of the massive reach of the new BGEPA and how compliance with the permit program will be complex and costly. First, a 10 mile radius is 314.2 square miles, or 201,088 acres per nest. So in order to comply with the BGEPA and obtain a take permit, a landowner will have to survey this enormous amount of land and water.

Under the BGEPA guidelines issued by the FWS, "buffers," or circles, will be established around nest trees, and within these buffers various types of human activity are restricted. Multiplying the acreage within these buffers by the number of bald eagle pairs in the lower 48 states (11,040) at the time of delisting results in the total acreage encumbered for these eagles. The most restrictive buffers, where the BGEPA's land-use controls will be most stringently regulated, extend up to 660 feet from a nest for a total of 520,247 acres (because some eagles maintain alternate nests, in case one is damaged, the average number of nests per pair, 1.5, has been used because the Guidelines apply both to active and alternate nests).[326] The second buffer in the Guidelines, which will be subject to less stringent land-use controls, extends from 660 feet to ½ mile, and this area covers 7,803,703 acres. Both buffer zones total 8,323,950 acres, or an area larger than the state of Maryland.

This total of 8,323,950 acres for both buffer zones, however, constitutes only a small portion of habitat used by nesting eagles. First is what is known as a bald eagle's "home range," the entire area a pair of eagles utilize, including the buffers around nests, for activities such

[325] U.S. Fish and Wildlife Service 2009b, p.46845.

[326] U.S. Fish and Wildlife Service 2007, pp.10-14.

hunting, feeding, and resting. The terms "territory" and "important eagle-use area" contained in various FWS documents for the new BGEPA are essentially synonymous with home range so for simplicity and clarity the term home range has been applied to these two other terms. Home ranges vary in size, but using peer reviewed data, a very rough average home range size is 3,600 acres per pair of eagles.[327] Multiplying 11,040 bald eagles by this average results in 39,744,000 acres, or an area approximately the size of Georgia and Delaware. It is, however, important to keep in mind there can be considerable overlap of home ranges, and while these acreage totals do not reflect this they still give a rough sense of the amount land that can be subject to the BGEPA in the lower 48 states for nesting bald eagles.

According to the FWS, it anticipates receiving annually 1,168 permit applications and granting 910.[328] Given that permits under the new BGEPA last five years, this means that in any given year, after the permit program has been in place five years, there will be some 4,550 permits extant. This translates into some 16,380,000 acres (if one uses the average home range size of 3,600 acres) subject to the BGEPA, or an area larger than West Virginia.

In addition to the massive amount of land and water that will be encumbered by the new BGEPA, it is readily apparent that the permit application process is quite onerous when the amount of land and water occupied by each bald eagle pair—201,088 acres if one goes by the FWS's own estimate, or 3,600 acres for each home range—is compared to the information required for each application. Each application must contain maps and other digital imagery of important eagle-use areas, home ranges, and a variety of other information, all of which is likely beyond the expertise and financial means of the average non-corporate landowner. To compile this type of detailed information landowners will likely have to hire consultants. The FWS, however, sees it differently. "The majority of people will be able to submit this information to the Service without the need to hire a consultant, especially with the help of local and State government staff who may be willing to provide assistance with location and distance information between the project and the eagle nest or use area," claims the FWS.[329] This

[327] Buehler 2000.

[328] U.S. Fish and Wildlife Service 2009b, p.46858.

[329] U.S. Fish and Wildlife Service 2009b, p.46849.

assertion is simply illogical and disingenuous given the complexity of the information necessary for the permit application.

In addition to the land that will be encumbered by the BGEPA for the protection of nesting pairs of bald eagles, there is potentially yet more land that will be impacted by the Eagle Act. While roughly two-thirds of the bald eagle's population consists of pairs, the rest consists of "floaters" (unpaired juveniles and adults).[330] These non-breeding eagles range very widely, each typically over 10,000 or more square miles. Wintering bald eagles must also be considered because of the influx of eagles from Canada, which brings the winter population in the 48 states to roughly 40,000 eagles. As with breeding eagles, wintering bald eagles have home ranges, albeit much larger (10 to 100 square miles per eagle) than nesting pairs.[331] It is, however, important to keep in mind that floaters and wintering eagles are less sensitive to disturbance than nesting eagles and that while nesting eagles maintain territories, unpaired and wintering eagles do not. In addition, wintering eagles are not spread evenly across the landscape because they tend to congregate in areas with good food sources, and, as with unpaired eagles, there is considerable habitat overlap. Nevertheless, it is still very likely the FWS will apply the new BGEPA to wintering eagles and floaters.

Another way in which the new BGEPA is an ESA-lite is that mitigation will in all likelihood be required for many permits. Under the ESA, mitigation is almost invariably required for Habitat Conservation Plans. In the case of the BGEPA, "Acquisition or protection of eagle habitat at an onsite or offsite location is one common form of compensatory mitigation," according to the FWS. "Compensatory mitigation can also be provided through mitigation funds to a third party that is responsible for habitat protection or restoration, such as another federal agency, a state or local government agency, or a conservation organization. Using mitigation funds for purposes other than habitat acquisition or protection–such as eagle surveys or other eagle-related research–might also serve as viable mitigation."[332] The FWS also mentioned conservation easements as a form of mitigation.[333]

---

[330] Blood and Anweiler 1994, p.50.

[331] Buehler 2000.

[332] U.S. Fish and Wildlife Service. ND. *Migratory Bird Management Information*.

[333] U.S. Fish and Wildlife Service 2009b, p.46855.

POTENTIALLY UNANTICPATED CONSEQUENCES

There are a number of likely impacts of the new ESA-like BGEPA. These impacts will likely come as a surprise to people who thought the eagle's delisting meant an end to the ESA's regulations.

States with large and/or rapidly growing bald eagle populations

One way to get an idea of potential impacts of the new ESA-like Eagle Act is to identify those states with large and/or rapidly growing bald eagle populations.

STATE BALD EAGLE PAIRS IN THE CONTINENTAL U.S. (2000, 2005, 2007) and PERCENTAGE POPULATION INCREASE (2005-2007 and 2000-2007)

STATE	2000	2005	2007	05-07	00-07	STATE	2000	2005	2007	05-07	00-07
Alabama	27	62	100	61%	270%	Montana	229	216	325	50%	42%
Arizona	37	40	43	8%	16%	Nebraska	20	29	44	52%	120%
Arkansas	36	39	75	92%	108%	Nevada	1	2	5	150%	400%
California	151	200	200	0%	32%	New Hampshire	4	8	12	50%	200%
Colorado	42	50	65	30%	55%	New Jersey	25	53	65	23%	160%
Connecticut	4	8	15	88%	275%	New Mexico	3	3	2	-33%	-33%
DC	0	0	1	NA	NA	New York	52	84	123	46%	137%
Delaware	16	32	43	34%	169%	North Carolina	33	66	60	-9%	82%
Florida	1,069	1,158	1,166	1%	9%	North Dakota	9	10	35	250%	289%
Georgia	55	82	113	38%	105%	Ohio	63	88	158	80%	151%
Idaho	113	156	216	38%	91%	Oklahoma	31	53	60	13%	94%
Illinois	36	36	135	275%	275%	Oregon	371	416	470	13%	27%
Indiana	24	62	79	27%	229%	Pennsylvania	47	94	106	13%	126%
Iowa	100	190	210	11%	110%	Rhode Island	0	1	1	0%	NA
Kansas	9	22	29	32%	222%	South Carolina	153	206	227	10%	48%
Kentucky	23	43	50	16%	117%	South Dakota	10	30	46	53%	360%
Louisiana	182	318	337	6%	85%	Tennessee	43	60	120	100%	179%
Maine	234	370	414	12%	77%	Texas	78	160	160	0%	105%
Maryland	270	383	400	4%	48%	Vermont	0	0	1	NA	NA
Massachusetts	12	18	25	39%	108%	Virginia	283	453	560	24%	98%
Michigan	362	405	500	23%	38%	Washington	564	664	835	26%	48%
Minnesota	681	872	1,312	50%	93%	West Virginia	10	19	27	42%	170%
Mississippi	25	25	31	24%	24%	Wisconsin	770	1,020	1,065	4%	38%
Missouri	64	100	150	50%	134%	Wyoming	97	95	185	95%	91%

Chart compiled from various federal and state data sources.

BALD EAGLE PAIRS IN THE CONTINENTAL U.S. (2000, 2005, 2007) and PERCENTAGE POPULATION INCREASE (2005-2007 and 2000-2007)

2000	2005	2007	05-07	00-07
6,468	8,501	10,401*	22%	61%

*This total almost certainly represents an undercount of the number of bald eagle pairs because it is based on outmoded data. However, in order to arrive at a conservative estimate, a low population total for 2007 was used. As of 2007, there are at least 11,137 pairs in the contiguous U.S.

As the chart of state bald eagle populations makes clear, there are many states that either have large bald eagle populations—most notably Minnesota, Florida, Wisconsin, Washington, Oregon, Virginia, Maryland, Michigan, Maine, Montana, and Louisiana—or rapidly growing populations, such as Illinois, Alabama, Arkansas, and Tennessee. Landowners in these states are most likely to feel the impacts of the Eagle Act in the coming years (some states with rapidly growing populations—e.g., Nevada and North Dakota—are much less likely to do so because they have relatively little eagle habitat and therefore limited ability to have significant eagle populations).

Alaska

The foregoing statistics on bald eagle populations do not, however, take into account the state with by far the largest bald eagle population with some 60% of the U.S. total—Alaska. With approximately 15,000 pairs and an additional 20,000-45,000 unpaired individuals, there is considerable potential for Alaskans to become encumbered by the new Eagle Act.[334] This will likely be a great surprise to Alaskans because they are not accustomed to the ESA-like regulations for the bald eagle.

Golden Eagle

Another area of potential conflict created by the new Eagle Act pertains to states with large golden eagle populations. Data on golden eagles are much less precise than bald eagles for a number of reasons, including that there has never been as much funding for surveying golden eagles than there has been for bald eagles. Even so, as the following table shows, a number of states, especially Wyoming, have large golden eagle populations. Furthermore, golden eagle populations range wide appear to be declining.[335] If this turns out to be the case, regulatory authorities will subject human activities that could impact golden eagles to increasing scrutiny and likely restrictions.

[334] U.S. Fish and Wildlife Service 2007c, p.31142.

[335] Kochert and Steenhof 2002; Hoffman and Smith 2003.

State	Golden Eagles (pairs)
California	500
Idaho	156
Montana	50
Nevada	1,200
Oregon	506
Washington	190
Wyoming	3,381

HCPs under the ESA

Perhaps the best way to get a sense of the likely effects of the new BGEPA, and how onerous the new law will potentially be, is to take a look at how Habitat Conservation Plans (HCPs) have been implemented under the ESA. In theory, the provision of Incidental Take Permits under Section 10 seems to be a good idea that gives landowners a fair shake. In practice, however, Section 10, and the Habitat Conservation Plans (HCPs) that landowners are required to prepare in order to be granted an Incidental Take Permit, has been a very burdensome. In order to be granted an Incidental Take Permit an applicant often must agree to include in their HCP mitigation, which is almost invariably setting aside some of their land or purchasing land elsewhere. Habitat Conservation Plans and the ESA in general also put the federal government in the dubious role as a zoning authority, a function that traditionally, under the Constitution, has been left to municipalities and states.

An example of how HCPs work under the ESA is the experience of Murray Pacific Lumber, a company in Washington State. In the 1990s the Interior Department under Secretary Bruce Babbitt began aggressively twisting the arms of landowners to sign HCPs, and once such landowner was Murray Pacific. The company was desperate because the presence of endangered species, such as the spotted owl, had locked-up some 40%, or 22,000 acres, of the company's 55,000 acres. So Murray Pacific signed an HCP under which it agreed to put off limits 5,500 acres for endangered species in exchange for freeing up the rest of their land. The cost of the HCP was substantial, millions of dollars of timber turned into a defacto federal wildlife refuge and over $1,000,000 spent on the biologists and lawyers who wrote and negotiated the HCP.[336] The federal government saw the Murray Pacific HCP as a great success because it was the first

[336] Brown 1997.

plan to include one of Babbitt's ESA "innovations," the "no surprises" policy. No surprises meant that once the Interior Department made a deal it would not come back later seeking more concessions such as land and/or money. There was, however, one giant loophole known as an "extraordinary circumstance," which could be the listing of another endangered species not covered by the HCP, or a massive storm, a drought, or any number of things. In short just about anything could be used by the Interior Department, or litigious environmental pressure groups, to demand more mitigation.

At the time of the Murray Pacific HCPs signing, such considerations were of little concern to the federal government because of the need to sell the HCP as a solution to the conflict ridden HCP. The Murray Pacific HCP is "a new way of doing business . . . saying yes to partnerships and to progress," according Katy McGinty, then Chair of the President's Council on Environmental Quality during the Clinton Administration.[337] The owner of Murray Pacific, Toby Murray, had a very different take. "Even though they call these habitat conservation plans voluntary, I didn't feel it was that voluntary," he stated. One reason for his view is that he had to spend so much and forfeit so much of his company in order to stay in business.[338]

While Toby Murray's ordeal is an example of how corporations and other large landowners can expect to be treated under the rewritten BGEPA, the experience of Pete and Pam Wright is more typical of what small landowners can expect. In 2002, the Wrights purchased 4.5 acres of land in Virginia on the Chesapeake Bay in order to build their dream retirement home. Most of the land had been clearcut of timber, and even though the land was zoned for eleven houses the Wrights only planned to build their house and sell two lots to finance construction of their home. The Wrights also had a pair of bald eagles nesting on their property so they contacted the FWS. Someone from the FWS visited their land in September 2003 and suggested they apply for a "low effect" HCP, another of Secretary Babbitt's window dressing innovations to make the ESA seem less onerous. The low effect HCP did nothing to remove the severe penalties that are the overarching problem with the Act.

To guide landowners through the HCP process, the FWS released a handbook in 1996, one portion of which addressed low-effect HCPs.[339] The FWS handbook describes low-effect

---

[337] Pryne 1995.

[338] Brown 1997.

[339] U.S. Fish and Wildlife Service 1996e.

HCPs as those that would have "minor or negligible effects" on the impacted species, and as a result the HCPs will be characterized by, among other things, "establishing clear processing standards" and "categorically excluding low-effect HCPs from NEPA requirements."[340] This last criterion is especially important because it means that low-effect HCPs are not required to complete any of the reports (Environmental Assessment or Environmental Impact Statement) necessary under NEPA (National Environmental Policy Act) and which can be extremely onerous and expensive. As a result, the "target permit processing time is 3 months," for low-effect HCP, according to the FWS.[341]

These assurances from the FWS about the supposedly landowner friendly nature of low-effect Conservation Plans are germane because the agency has made similar assurances for the proposed permit program under the BGEPA. "The typical permit-application process will be less burdensome for the applicant than the permit process under the ESA, since an HCP is not required, states the FWS. "Preparing an HCP can be time consuming and is usually delegated to a professional consultant."[342] Given the difficulty the Wrights had with their low-effect Plan, it is very likely that landowners will have similar difficulties with the BGEPA permit program

As a result of assurances from the FWS that they qualified for a low-effect Plan, Pete and Pam Wright thought the process of writing the Plan would be relatively straightforward. They were, however, soon to learn this was not the case. In late November 2002, after completing a draft low-effect HCP, the Wrights requested a meeting with the FWS agent with whom they had met in September. However, the tenor of the November meeting was distinctly adversarial because attending the meeting, along with the person they had met with in September, were the two other people from the FWS Virginia Field Office, Karen Mayne, the Director, and Jolie Harrison, a biologist. The demeanor of the Mayne and Harrison was chilly, and both soon shifted the focus of the meeting to how the Wrights could use a conservation easement as mitigation for their proposed house. The Wrights offered to provide two of the eleven lots for which the property was zoned as compensation, but Mayne deemed this as insufficient. Mayne and Harrison asked the Wrights if they would reduce the number house lots from three to one,

---

[340] U.S. Fish and Wildlife Service 1996e, pp.1-8, 1-9.

[341] U.S. Fish and Wildlife Service. ND. What is a Habitat Conservation Plan and Incidental Take Permit?

[342] U.S. Fish and Wildlife Service 2009b, p.46847.

which the Wrights did not want to do because they were counting of the sale of these lots to finance construction of their house (as it turned out, the two lots were worth a total of around $350,000). At the meeting, the FWS gave the Wrights a guide to conservation easements. Pete and Pam left the meeting bewildered and discouraged.

Later that day Pam called the Virginia Department of Historical Resources because the Wrights had to get this state agency to issue written approval that no historical resources would be destroyed during the course of their housing being built. However, during the course of the phone call Pam learned that the FWS agent with whom she and Pete initially met in September had called Historical Resources a few days prior to Pam's call and recommended that the Wrights proposed house be subject to a full NEPA review. Such a review would be very time consuming and expensive because, among other things, it requires landowners to prepare an Environmental Assessment or an Environmental Impact Statement, highly technical and detailed documents that almost invariably necessitate hiring at least one consultant and lawyer to complete. The Wright's contact at Historical Resources said she was "astounded" at the FWS's recommendation because a project as small as the Wrights had never before been subject to a full NEPA review. Eventually the Wrights were able to secure the assurance of Historical Resources that their proposed house did not qualify for a NEPA review, because the site was not going to impact historical resources. Even so, the phone call left the Wrights even more shaken than they were after leaving the meeting with the FWS. It was becoming increasingly clear to the Wrights that the FWS was playing hardball with them and that the low-effect HCP was anything but an easy process.

The next step in the Wright's saga occurred in early December 2002 when a state wildlife agent and people from the FWS's Virginia office visited the property. The Wrights showed the attendees the two lots they were willing to offer as mitigation, but Karen Mayne from the FWS said the lots were insufficient. Other ideas for mitigation offered by the Wrights were also deemed insufficient. But the real bombshell occurred when the FWS stated that the Wrights had to prepare an Environmental Assessment, which meant that the Wrights were going to be subject to NEPA after all. Pete then asked Karen Mayne why she and the FWS were not adhering to the agency's HCP Handbook, which specified that low-effect HCPs were not subject to NEPA, and therefore were not required to prepare Environmental Assessments. Ms. Mayne replied that the

Handbook was not accurate because of "litigation" but refused to specify how this was so. At the end of the meeting, Mayne gave the Wrights three options:

1) Purchase nine acres in the immediate vicinity as mitigation because this was equivalent to a 350-foot radius around the nest tree. Pete pointed out waterfront land in the area was selling for $100,000-$150,000/acre so nine acres would likely cost over one million dollars.
2) Purchase nine acres of land somewhere else in Virginia and place the land under a conservation easement
3) The Wrights could contact individuals and organizations to try to find someone willing to sell them land to put in a conservation easement.

The final blow was that the FWS agent who initially visited the property said that the nine acres of mitigation would have to be purchased and placed in a conservation easement before the FWS would process the Wright's Habitat Conservation Plan. Given the FWS's capriciousness to that point, the Wrights were justifiably concerned that even if they purchased the nine acres the agency could very well change its mind and demand more land for mitigation before processing, to say nothing of actually approving, the Conservation Plan.

Over the ensuing weeks the Wrights communicated with the FWS Field Office to try to obtain clarification as to why their property no longer qualified for a low-effect HCP and why they were now subject to NEPA, but they received no response. When Karen Mayne finally responded, she stated that the Wrights no longer qualified for a low-effect HCP because the FWS was worried about being sued. The Wrights were starting to believe that the real reason was that they were perceived by Mayne and others as being impertinent and disobedient for having raised substantive questions persistently with the FWS. As a result, the agency seemed to be retaliating by requiring a more onerous type of HCP. Nevertheless, the Wrights submitted their low-effect HCP to the FWS at the end of January 2003. The HCP contained two alternatives for mitigation: two of the eleven lots the Wrights had purchased; or, a $1,500 mitigation fee (which was derived by roughly averaging mitigation paid by three of the four other bald eagle-only HCPs that had been signed to date). The FWS rejected the proposed HCP because of insufficient mitigation.

The next step occurred in February 2003 when the Wrights had a conference call with the FWS personnel who were involved. The upshot of the call was that the agency wanted the

Wrights to create a conservation easement. The FWS deemed the easement would cost around $10,000, but the agency said that the Wrights should be expected to pay for only half, or $5,000, of the easement. Lastly, Karen Mayne suggested the Wrights contact The Nature Conservancy to determine if it could be a conduit for the funds. The involvement of the Nature Conservancy in FWS land conservation projects is relatively commonplace, but it raises a host of troubling questions, foremost of which is how a private, non-profit organization can act as a land brokerage arm of the federal government.

Despite the sudden and unexpected entry of the Conservancy into negotiations, the Wrights were relieved because it seemed that they finally had a clear path out of their bald eagle morass. A few days after the conference call, the Wrights contacted the The Nature Conservancy and had a positive conversation with an employee who was amenable to involving the Conservancy with an easement for the Wrights. In order to go ahead with the easement, however, the Wrights required clarification from the FWS on some key outstanding issues (e.g., the size of the easement). The Wrights contacted the FWS but did not receive answers to these issues. The next communication from Karen Mayne made it clear that she had been communicating extensively with The Nature Conservancy, which was disturbing to the Wrights because it appeared that Mayne and the FWS were improperly inserting themselves into negotiations with the Conservancy and that the agency and the Conservancy were negotiating behind the Wright's backs. Thereafter, when the Wrights communicated with their contact person at the Conservancy he was distinctly less enthusiastic about an easement. He also indicated that an easement would likely cost considerably more than the $5,000 he led the Wrights to believe would cover their portion of an easement.

This awkward dance, in which the Wrights were trying their hardest to keep in step with the constantly changing "music" played by the FWS, and then The Nature Conservancy, continued until March 2003 when the eagles abandoned their nest and built another in the area. The final chapter occurred in August 2003 when the abandoned eagle nest on the Wright's property blew down in a storm and the Wrights were finally free of any land-use restrictions related to the bald eagle. Had this not occurred, the Wrights in all likelihood would have continued to be ensnared in the FWS's Never-Never Land. Most landowners do not catch such a lucky break.

The Wright's saga reveals a number of troubling aspects about FWS involvement with bald eagle conservation.

1) Given that the new Bald & Golden Eagle Protection Act's proposed permit program appears so similar to the ESA's HCP process, landowners can expect to go through similar ordeals under the new BGEPA as the Wrights did under the ESA.
2) The FWS frequently "moves the goalposts" by changing its mind with regard to mitigation required of landowners, and the result is that landowners often have to contribute increasing amounts of land and/or money in order to secure regulatory approval from the agency.
3) If people as educated and savvy as the Wrights—Pete successfully won a case before the Supreme Court and Pam is a psychotherapist—have difficulty navigating FWS bald eagle protection requirements, then most other people will very likely find the new BGEPA's Management Guidelines and Permit Program unworkable unless they lawyers and biologists.
4) The low-effect HCP under the ESA is sold by the FWS as being landowner friendly, including being easy to compile and submit. But the Wrights spent over 1,500 hours researching and developing their low-effect Habitat Conservation Plan, and even this was insufficient to satisfy the FWS. Most landowners will not be able to spend this amount of time to compile, write and submit the supposedly low-effect-HCP-like permits under new BGEPA.
5) The involvement of The Nature Conservancy, at the behest of the FWS, raises a host a questions as to whether the Conservancy is a private organization or, as appears, is a quasi-public land broker for the federal government.
6) Even though there are national guidelines for bald eagle protection, they are national in name only because, as the Wright's case so vividly illustrates, they are subject to interpretation by local FWS personnel to such a degree that guidelines can be rendered relatively meaningless.

The ordeals of the Pete and Pam Wright, Ed Contoski, and Toby Murray provide a vivid picture of how the FWS will in all likelihood implement the BGEPA and how the FWS has turned the BGEPA into a mini version of the ESA. Even if people are able to negotiate successfully the onerous requirements of the new BGEPA permit regime, they will not be out of the woods. In one of the little noticed parts of the new permit program under the BGEPA,

permittees are required "to provide basic post-activity monitoring (described below) by determining whether the nest site, communal roost, or important foraging area continues to be used by eagles for up to three years following completion of the activity for which the permit was issued," according to the FWS.[343] In a perverse twist the FWS claims this requirement is in part to "ensure that permit requirements are not unnecessarily burdensome to the public" while no mention is made of the burden to the permittee.

CONCUSIONS ON DELISTING IN NAME ONLY

The FWS's rewriting of the Bald and Golden Eagle Protection Act in order to transfer much of the ESA's land-use control functions to the BGEPA is troubling for a number of reasons, one of which is that the FWS still does not grasp that the ESA's onerous land-use restrictions likely have caused more harm than good to the bald eagle. Unfortunately, the same mistake will likely be repeated all over again with the amended BGEPA.

Carrying over the ESA's land-use control provisions may well be bad news for bald eagles. The ESA's perverse incentives are created by the Act's highly punitive land-use control provisions. The result has been, as the FWS's bald eagle coordinator acknowledged, landowners making their property inhospitable to eagles. Sadly, those in favor of turning the BGEPA into a mini-ESA are stuck in a mindset that is more concerned with regulation than successful wildlife conservation. This is a lose-lose proposition for both the eagle and the landowners who are forced to conserve the eagle. The key to the bald eagle's conservation, or most any species of wildlife, is the willing cooperation of private landowners. The bald eagle needs more people to step up and volunteer to conserve it; not more people to step back and try their hardest to conceal that they have eagles on their property or even make their property inhospitable to eagles by destroying or degrading habitat. Unfortunately, in case of the new BGEPA what we are left with is more of the same type of confrontational and coercive conservation that has not served the eagle well. This is the Pyrrhic victory earned by the FWS, environmental pressure groups and other fellow travelers.

[343] U.S. Fish and Wildlife Service 2009b, p.46841.

EXCESSIVE MONITORING

Another indication of the FWS's reluctance to let the eagle fly free of the ESA is the agency's monitoring plan. After a species is delisted, the Act mandates that it is monitored for at least five years to insure the population does not decline, and if a decline is detected, re-listing might be necessary. In 2009 the FWS published the bald eagle monitoring plan.[344] Unfortunately, the plan is an elaborate twenty-year monitoring program that consists of four, five-year monitoring intervals.[345] Monitoring the eagle for twenty years is unnecessary in light of a number of factors; the population has been so healthy (for example, having far exceeded its recovery goals), a number of states continue to conduct monitoring programs, and the eagle's high profile and popularity virtually insure the species's continued health. The excessive length of time to monitor the eagle is also the same amount of time the agency is monitoring the American, or *anatum*, sub-species of peregrine falcon, which was delisted in 1999.

A number of people knowledgeable about the ESA and species conservation have noticed the problem of excessive monitoring. While these observations are about other species, they are equally applicable to the bald eagle. "If we look to the example of the *tundrius* Peregrine, no monitoring plan was implemented," state Tom Cade and Bill Burnham, founder and former president, respectively, of the Peregrine Fund and two of the world's leading experts on raptor conservation. "For the *tundrius* and the *anatum* race alike, one thorough survey at the end of the five years would be sufficient. Because several biologists have continued to monitor their populations since delisting and Peregrine numbers continue to increase, those data could probably be considered sufficient and representative for regional populations of the species."[346]

Others have also commented on problems with post-delisting monitoring plans. "The post de-listing monitoring obligations/process also needs revision—it is too onerous and subject to too much federal agency discretion," according to Gary Taylor, Legislative Director of the International Association of Fish and Wildlife Agencies, the trade association for state wildlife agencies. "For example, the states believe that biological recovery objectives for the grizzly bear

[344] U.S. Fish and Wildlife Service 2009c.

[345] U.S. Fish and Wildlife Service 2009c.

[346] Cade and Burnham 2003b, p.276.

have long been satisfied but the Service has never settled on a post-delisting monitoring plan and thus until very recently, held up a delisting proposal for this species. The same is true of the bald eagle."[347] The FWS's excessive monitoring of the bald eagle looks more like a jobs program for biologists than it does an actual benefit for the eagle. Many states, especially states with the highest bald eagle populations in the 48 contiguous states (e.g., Florida, Minnesota, Wisconsin, Washington, Virginia) already conduct bald eagle surveys, almost all of them annually. Therefore, the FWS's monitoring program is duplicative and essentially unnecessary.

CONCLUSIONS

The resurgence of the bald eagle in the lower 48 states is something to celebrate. In the final analysis, it is not clear the ESA was necessary for the conservation of the bald eagle for a number of reasons:

1) DDT, the paramount cause of the eagle's resurgence, was banned one year prior to the ESA's passage.
2) The ESA's punitive restrictions relating to habitat use may have caused more harm than good on private property where most bald eagles nest and live. The ESA likely did help the eagle on federal and state lands.
3) Some 70% of the eagle population in the lower 48 states received no protection from the ESA for four years after the Act's passage, a time period in which the species was as is most vulnerable following the DDT-induced population crash
4) The decline in shooting mortality was likely due to increased penalties and changing social values, and which could have been accomplished under laws other than the ESA
5) The ESA did provide a boost, albeit relatively modest, by helping to ban lead shot for waterfowl hunting.
6) Population surveys were carried out primarily by states, not the federal government.
7) Reintroduction of bald eagles to areas from which they had been extirpated was carried out primarily by states and private organizations, not the FWS under the auspices of the ESA.
8) Legislation other than the ESA helped conserve the eagle.

[347] Taylor 2005.

9) Reclassification of the eagle, from endangered to threatened as well as delisting altogether, was unnecessarily delayed due to a desire to use the eagle as a land-use control tool and for fundraising.
10) Transferring most of the ESA's land-use controls to the BGEPA bodes ill for the eagle and for the landowners who will be compelled to conserve the eagle.

Furthermore, had the ESA never been passed, it is very likely that environmental pressure groups, Congress and citizens across the country would have joined together to undertake efforts to conserve the bald eagle.