

Endangered Species and Safe Harbor Agreements: How Should They Be Used?

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Abstract

In its original format, the Endangered Species Act of 1973 was a classic example of the “command and control” model of environmental management. The “command and control” model creates unintended effects opposite to the stated purpose of the Endangered Species Act such as clandestine destruction of endangered species and their habitat. In order to resolve this issue the Endangered Species Act has moved away from the “command and control” model towards a more collaborative contractual model that allows for flexibility and creates enforceable agreements between Federal and nonfederal entities that protect the interests of all parties involved. This paper examines the most recent type of contractual agreement included in the Endangered Species Act, Safe Harbor Agreements, and how Safe Harbor Agreements should be used with respect to endangered species. The paper begins with a description of the creation of the endangered species legislation and continues by defining the steps leading to the development of Safe Harbor Agreements. The following portions of the paper include case studies and a description of weaknesses and strengths of Safe Harbor Agreements. The paper concludes with policy recommendations for utilization of Safe Harbor Agreements.

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Chapter 1

Introduction

At the time the Endangered Species Act (ESA) was conceived the Federal government was in need of enforceable protections against the loss of endangered species. The Endangered Species act of 1973 was initially written as a “bright line rule” meant to deal with the problem of species extinction. According to Merriam-Webster's Dictionary of Law a bright line test is one that provides, “a clear distinction that resolves a question or matter in dispute.” Therefore “bright line rule” is binary in that an act is either right or wrong without much regard to variable circumstances. In its original format, the ESA brought with it strict regulation in the event of the presence of an endangered species. As a “bright line rule” the ESA was a classic example of the command and control approach to environmental regulation.

The question remains as to whether the command and control approach works as intended (Ruhl 1998). The land use regulations imposed by the ESA were often in conflict with landowners’ behaviors and land use preferences. Landowners whose interests are restricted by the Endangered Species Act have an incentive in not attracting endangered species to their property. As such, the ESA inadvertently created a disincentive to manage habitat for the benefit of endangered species.

The implementation and enforcement of the ESA caused unintended effects from landowners who sought out to actively protect their interests. Political backlash and effects opposite to the stated purpose of the ESA followed the adoption of the ESA.

Some landowners found loopholes in the ESA and others engaged in outright illegal activity in order to avoid restrictive regulation under the ESA.

In order to deal with the unintended effects of the ESA, Congress and the agencies that administer the ESA made several modifications to it. Creativity spawned mechanisms that allow for flexible enforcement of the act under differing circumstances. Some of these mechanisms include incidental take permitting, habitat conservation planning and the most recently, Safe Harbor Agreements (SHAs)¹. SHAs were designed to deal with the disincentives associated with management for the benefit of endangered species. Under an SHA a landowner who manages his or her land for the benefit of endangered species can be relieved of certain ESA restrictions thereby removing a degree of disincentive.

Throughout the history of the ESA such innovations were both praised and criticized by diverse groups of stakeholders. Some conservationists argue that the ESA has been weakened while private interest groups argue its amendments and administrative modifications only allow more incursions by the Federal government on private property. The law must recognize the diversity of stakeholders and circumstances that exist and be capable of adapting (Ruhl 1998). The ESA illustrates the difficulties in that regard, for no one recipe exists for how to manage all endangered species, or all imperiled ecosystems, or all the concerns of individual landowners (Ruhl 1998). The ultimate issue at hand is whether or not exception made in the ESA help in achieving the ultimate goal of the ESA without causing undue harm. Clearly, the cooperation of

¹ Safe Harbor Agreements are contracts between nonfederal landowners and the Federal government where landowners agree to undertake certain land management activities for the benefit of endangered species. In return they receive incidental take permits that allow them to eventually undo habitat improvements, which would be prohibited under the ESA.

nonfederal landowners is necessary for most species to meet the ESA requirements that would allow them to be removed from the endangered species list. It is unclear as to whether or not these innovations have brought the ESA closer to its goal: preserving endangered species.

As the most recent addition to the ESA, SHAs are empirically unproven. This paper examines SHAs with respect to the goals of the ESA. More specifically, this paper describes the relevant history of the Endangered Species Act, the creation and adoption of the Safe Harbor Policy, its strengths, weaknesses, and concludes with recommended uses of SHAs. The beginning sections of the paper deal with the history of the ESA that eventually led up to the development of SHAs. The next sections of the paper consist of case studies and analysis addressing the strengths and weaknesses of SHAs. The final section concludes with the recommended applications of SHAs with respect to their strengths and weaknesses.

Chapter 2

History of the Endangered Species Act

2.1. Creation of the Endangered Species Act of 1973:

The Federal government first recognized a regulatory obligation to protect endangered species with the Endangered Species Preservation Act of 1966 (ESPA). The ESPA listed domestic fish and vertebrate wildlife, but made very little impact outside of requiring the Departments of Agriculture, Interior, and Defense to preserve endangered species habitat on government lands “insofar as is practicable and consistent with their primary purpose.” While the ESPA did authorize modest land acquisition (\$15 million per year) the act did not carry very many obligations and did not recognize that endangered species rely heavily upon nonfederal properties. In order to provide any significant level of protection to endangered species the ESPA had to be expanded upon.

The Endangered Species Conservation Act followed the ESPA. The Endangered Species Conservation Act of 1969 was passed to provide additional protection to species or subspecies in danger of "worldwide extinction." Import of such species was prohibited, as was their sale within the United States. The Endangered Species Conservation Act also expanded the Department of Interior’s land acquisition authority and significantly broadened the definition of fish and wildlife to include invertebrates. However, these laws did not carry enough force to adequately protect endangered species or appease those involved in the growing environmental movement. In order to address these issues Congress needed to extend the reach of existing law yet again.

In 1973 Congress passed the ESA in response to concern over the continued decline of charismatic and high profile animals such as the bald eagle (*Haliaeetus leucocephalus*) and polar bears (*Ursus maritimus*) (Kishida 2001). Congress recognized that species extinction is "a consequence of economic growth and development untempered by adequate concern and conservation." (16 U.S.C 1531 (a)(1)). Congress also acknowledged that endangered and threatened "species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people" and therefore had a basis for the creation of law protecting endangered species on public and private land (Sheldon 1998, 16 U.S.C 1531 (a)(3)).

The Endangered Species Act of 1973 has influence over the Federal government as well as nonfederal entities where endangered species were present. The U.S. Fish and Wildlife Service (FWS) in the Department of Interior and the National Oceanic and Atmospheric Administration (NOAA) in the Department of Commerce jointly administer the ESA. Though overlap exists, the FWS works largely with inland species while NOAA works with marine species.

The ESA contains many sections that define important terms in the Act, administration of the Act, and the procedures for listing endangered species, as well as penalties and enforcement of the Act. However, the two sections in the ESA that define which entities and what activities may be subject to regulation are the sections that encounter most conflict. These sections are Section 7 and Section 9, and are the most contentious aspects of the Act. Through the enforcement of the ESA and a series of court cases that followed, the scope of the language in these sections became known. The language in these sections, and the events that took place in response to the language, is

important to how the act has changed over time. Appendix 1 contains a timeline of important dates in ESA legislation.

2.2. Section 7 of the ESA:

Section 7 of the ESA states that the Federal government must "insure that any action authorized, funded, or carried out by such [Federal] agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species." (16 U.S.C. 1536 (a)(2)). This language prohibits the Federal government from participating or funding activities that may "jeopardize" or have negative impact on endangered species habitat. The rigidity of the preceding language was tested in the Supreme Court Case *Tennessee Valley Authority v. Hill* 437 U.S. 153; 98 S. Ct. 2279; 57 L. Ed. 2d 117 (1978).

In this case the finding of the then endangered (now threatened) snail darter (*Percina tanasi*) essentially halted the building of the Tellico Dam by the Tennessee Valley Authority. Enforcement of the ESA over the Tellico Dam project halted the project. Enforcement of the ESA in the name of the tiny snail darter was held up in court forcing people take notice of the power of the ESA over Federal government activities. The Supreme Court's majority opinion held that the meaning and intent of the language in Section 7 was clear and that the worth of the activity had no bearing on the enforcement of the Act. Within the same year, this decision led directly to the creation of the 7 member cabinet level - Endangered Species Committee chaired by the Secretary of Interior popularly dubbed the "God Squad." The "God Squad" may essentially remove

ESA restrictions over an activity if it determines that the action is of regional or national significance, that the benefits of the action clearly outweigh the benefits of conserving the species and that there are no reasonable and prudent alternatives to the action. Thus, the Federal government can now knowingly permit an activity that contributes to species extinction, hence the name “God Squad”. Some conservationists find the perpetuation of species extinction unacceptable for any reason. The outcomes of the snail darter case set a precedent in the interpretation of Section 7 that would resonate in later decisions and even manifest itself in decisions regarding the language of Section 9.

2.3. Section 9 of the ESA:

Section 9 of the ESA differs from Section 7 in that Section 9 applies to every person “subject to the jurisdiction of the United States,” (16 U.S.C. 1538 (a)(1)). Before changes were written into the ESA, Section 9 unconditionally prohibited the "taking" of any species listed as “endangered” or “threatened” under the act (Basilevac 2001).

“Take” is defined in the ESA as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct (16 U.S.C. 1532 (19)).” In *Palila v. Hawaii Dept. of Land and Natural Resources*, 639 F.2d 495 (9th Cir.1981) the question arose as to whether habitat modification fit under the ESA definition of “take”. The Sierra Club brought the case to court in the name of the Palila bird (*Loxioides bailleui*), asserting that habitat modification attributed to the Hawaii Department of Land and Natural Resources’ maintenance of feral sheep and goats for sport fit under the ESA definition of “take”. The U.S. 9th Circuit Court of Appeals upheld the lower court decision that the maintenance of the feral sheep and goats did in fact “harm” the Palila

via destructive habitat modification. Thus the definition of “harm” is now an important component of the overall definition of “take”. Also note that the court refers to Tennessee Valley Authority v. Hill in stating, “The Act requires the affirmative preservation of an endangered species (Palila v. Hawaii Dept. of Land and Natural Resources, 639 F.2d 495 (9th Cir.1981)).”

The meaning of “harm” was further defined in the Supreme Court Case Babbitt v. Sweet Home 515 U.S. 687; 115 S. Ct. 2407; 132 L. Ed. 2d 597 (1995). In this case the question was whether or not the “harm” could be applied to habitat modifications that impacted an endangered species indirectly or if “harm” should be limited to application of direct force. The Supreme Court reversed the decision of the District of Columbia Circuit Court of Appeals, stating that the term “harm” encompasses “indirect as well direct injury.” The majority opinion also points out that this decision coincides with its earlier decision in the snail darter case and the congressional intent of the ESA.

The term “harm” has been defined and redefined several times. The FWS issued regulations, pursuant to the Endangered Species Act of 1973, defining "harm" in 1975, and in 1981 (Sheldon 1998). The 1996 definition of harm in the Code of Federal Regulations is the most recent definition stating “harm” is “an act which actually kills or injures wildlife. Such act 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 (50 C.F.R 17.3 (1996)),” which essentially codifies the Sweet Home decision.

The new definition means nonfederal property owners are potentially subject to land use restrictions on activities that might otherwise be lawful. “Thus, if an endangered

bird were found on an undeveloped piece of privately owned land, the owner of that land would be barred from doing anything that degraded its habitat enough to kill or injure the bird (Kishida 2001).” Land use restrictions encountered in Section 9 have encountered opposition from landowners and property rights advocates who value the freedom to use their land as they wish over endangered species.

2.4. Complaints About the ESA:

There is no more controversial aspect of the ESA than Section 9’s restrictive effects on privately owned lands (Kishida 2001, Sheldon 1998). The right of citizens of the United States to use, enjoy, and reap the economic benefits of private property is regarded as fundamental in this country and has been held high by landowners and the courts alike (Sheldon 1998). The Fifth Amendment states that private property shall not “be taken for public use without just compensation.” However, under the ESA’s original format, private landowners whose land was inhabited by endangered or threatened wildlife had no recourse if their land use actions had the potential to harm those species. The ESA never compelled private landowners to undertake actions that benefit rare species, such as prescribed burning or the removal of harmful alien species (Wilcove and Chen 1998). Furthermore, landowners who wished to manage their properties on behalf of endangered species may have been deterred by the restriction the potential restrictions incurred under the ESA (Wilcove and Chen 1998).

The ESA traditionally relied on fines and jail sentences to punish or deter harmful conduct (Eisner et al. 1995). The anxiety of landowners has resulted in anti ESA advocates and newspapers recounting horror stories of ESA victims (Kishida 2001).

Some of these stories include homeowners who were barred from saving their property from a wildfire because of brush clearing restrictions, the farmer whose farm equipment was taken away by Federal agents, and businesses losing on long-term investments because of endangered species (Kishida 2001, Sheldon 1998).

2.5. Disincentives to Manage for Endangered Species:

Some authors have explored the creation of perverse incentives or disincentives for some landowners to engage in activities harmful to listed species to avoid being subject to ESA restrictions and the inverse of intended effects of the Act (Bean et al. 2001, Kishida 2001). In a conscious effort to avoid new restrictions on the use of their land, many landowners have consequently avoided activities that would attract endangered species to their property or increase the numbers of those already on there (Bean et al. 2001). “No regulation can be drafted so airtightly that it captures all activities that may transgress the regulation’s species protection goal (Ruhl 1998).” The ESA exemplifies this in that strict regulatory controls intended to protect rare species have prompted private landowners to do the exact opposite of what is needed to help these species (Bean et al. 2001). Terms used to describe efforts to circumvent the ESA include: defensive management, midnight bulldozing, and “shoot, shovel, and shut up” (Bean et al. 2001, Kishida 2001). Respectively, these terms refer to the acts of destroying habitat to prevent occupation by endangered species, destroying habitat of species proposed for listing while it is still legal, and the clandestine killing of endangered species to prevent documentation of their presence and subsequent land use restrictions.

Like midnight bulldozing, some kill organisms proposed for listing in order to remove them from a property before “take” restrictions can have any effect (Kishida 2001).

The enforcement of the ESA repeatedly fell in opposition to economic activity and development projects. The ESA has often been battled politically exemplified by the attacks made by land rights advocates, debate over reauthorization of the act, and the one-year moratorium on new listings (Kishida 2001). Even the constitutionality of the ESA has been called into question. Nowhere in the United States Constitution does the power exist to protect the environment for the sake of the environment. All environmental legislation is rooted in anthropocentric values. The purpose of the Act is explicitly anthropocentric stating that, “these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people,” (16 U.S.C. 1531 (a)(3)).

Public outcry from all sides of the debate has fed growing efforts to amend the ESA (Sheldon 1998). There have been attempts to pass constitutional takings legislation to relieve landowners of the cost of regulation. Darcy Kishida observed that, “having an agency pay for the economic effects of its regulations would naturally make it unfeasible for the government to effectively protect the environment.” Kishida also lists other legislative attempts to weaken the ESA including mandating that economic impacts and private property rights be considered when protecting species, changing the definition of “take” to mean only physical harm to the species, curtailing citizen suits, and requiring a peer review process for new listing decisions (Kishida 2001). In order for the ESA to survive amendments needed to be made.

2.6. The 1982 Amendments:

For all the controversy surrounding the effect of the ESA on private property, there has been more anecdotal information than empirical data associated with calls for strengthening or weakening the law's land use proscriptions. Advocates on both sides of the issue depend on staking out higher moral ground, using stories of imperiled species or property owners to defend their respective stances (Ruhl 1998). Nonetheless, conflicts like the Tellico Dam case brought to light the inflexibility of the ESA, making the ESA unpopular among some landowners and politically unstable. Congress and the FWS had to establish a mechanism of making exceptions to the "take" prohibition without undermining the intent and effectiveness of the Act.

In 1982, Congress addressed the rigidity of the act by amending the ESA to be more flexible. Among other things the amendment allowed for "incidental take" of some individuals of listed species (Durham 1996, Kishida 2001, Lewis and Roca March 1998, Sheldon 1998). Under Section 10(a)(1)(B)² of the ESA, nonfederal landowners who plan activities on their lands that may "incidentally take" (i.e., unintentionally harm) a listed species may apply to the FWS or National Marine Fisheries Service (NMFS) for an incidental take permit that exempts the from the prohibition against "take" (Aengst et al. 1997).

In order to receive an incidental take permit, the landowner must create a Habitat Conservation Plan (HCP) specifying the following:

² The Secretary may permit, under such terms and conditions as he shall prescribe -any taking otherwise prohibited by section 1538(a)(1)(B) of this title if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

- (A) The impact that will likely result from such taking;
- (B) What steps the applicant will take to monitor, minimize, and mitigate such impacts, the funding that will be available to implement such steps, and the procedures to be used to deal with unforeseen circumstances;
- (C) What alternative actions to such taking the applicant considered and the reasons why such alternatives are not proposed to be utilized; and
- (D) Such other measures that the Director may require as being necessary or appropriate for purposes of the plan... (50 C.F.R Section 17.22 (b)(1))

HCPs are especially important for landowners who wish to develop their property but are prohibited from doing so because of the ESA's "take" prohibition (Kishida 2001).

Compliance with the requirements of an HCP ensures that development can proceed with minimal interruption, even if an unlisted species covered by the plan is later listed as endangered or threatened (Fisher 1996). However, the few incidental take permits and corresponding HCPs that occurred in the decade following the 1982 amendment of the ESA demonstrated landowners' reluctance and skepticism of the HCP process. Nonfederal landowners lacked assurances that they would not be subject to future responsibilities, restrictions, or costs associated with endangered species management. Thus, until the adoption of the No Surprises Policy, which offered assurances against changes in responsibilities, the number of plans developed and implemented was wholly inadequate to alleviate the ever burgeoning tensions created by the growing number of listed species (Fisher 1996).

2.7. "No Surprises" & "Safe Harbor":

Incidental take permitting and HCPs allow for some exceptions to be made to the "take" prohibition. Before the "No Surprises" policy, unforeseen circumstances or the finding of endangered species not mentioned in an HCP could bring about the full weight of ESA restrictions. Landowners were understandably reluctant to invest and enter into

an HCP if a change in circumstances could allow the ESA to halt or impact an activity. Strident opposition from landowners and property rights advocates placed the Endangered Species Act under a constant threat of repeal, reform or judicial intervention, and compromised the ability of the U.S. Fish and Wildlife Service to administer and enforce the terms of the Act (ELI 1999). Thus, there was need for the Department of Interior to continue making the ESA more flexible.

A common complaint from nonfederal entities was that despite their willingness to work with the Federal government to protect species on their land, the Federal government had been reluctant to assure them that an HCP would not be reopened or changed at any time by the FWS (Fisher 1996). Along with these lines goes an idea used by anti ESA advocates that repealing the act would be followed by voluntary conservation efforts without fear of land use regulation. Many of those who have suffered under the ESA find it unfair. However, not everyone who finds the Act unfair would go so far as to say that removing the act would result in better landowner protection of endangered species (Ruhl 1998). In 1994 the “No Surprises” policy was announced by Secretary of Interior Bruce Babbitt to improve upon the implementation of the ESA on nonfederal lands and to solicit more voluntary cooperation.

The “No Surprises” policy assures landowners that once the agencies have approved an HCP, the landowner will not be required to accept new land-use restriction or financial commitment beyond those agreed to in the HCP (Aengst et al.1997). Thus, the landowner will not be surprised with new responsibilities or restrictions. If, in the course of development or land use, a landowner invests money and land into saving endangered, threatened, or unlisted species covered in and HCP, the government will not

later require that the landowner pay more or provide additional land even if the needs of species change over time (Fisher 1996). According to the “No Surprises” policy, the FWS will "not require the commitment of additional land or financial compensation beyond the level of mitigation which was otherwise adequately provided for a species under the terms of a properly functioning HCP" (Lewis and Roca March 1998). Thus, if “unforeseen circumstances” reduce the likelihood that a species covered by the HCP will survive over the term of the permit, the agencies agree to bear the sole responsibility.

Development of land and creation of HCPs is costly. Development with the potential of encountering land use restrictions is also risky. The assurances provided under the “No Surprises” policy are meant to address the problem of securing adequate funding. By providing economic certainty to all parties in the process, the “No Surprises” policy should leave lenders more willing to make financial commitments to developers necessary to implement large-scale HCPs (Fisher 1996). The Policy has led to an increase in the number of HCPs negotiated, with an accompanying growth in the amount of private land being managed for species conservation. Since the adoption of the “No Surprises” policy there has been a veritable explosion in the numbers and complexity of HCPs (Sheldon 1998). Between 1982 and 1992 only 14 HCPs were approved. As of September 2001 more than 360 HCPs had been developed covering more than 30 million acres.

The “No Surprises” policy has been controversial. Some environmental organizations attacked the “No Surprises” policy claiming that the policy provides an absolute assurance against any changes to an HCP, even if needed to protect the affected species (Baur et al. 1997). Furthermore, the incentive to enter into an HCP is based in the

landowners' wish to engage in activity that falls under the definition of "take". Thus while HCPs bring land under management for endangered species, they do so at the expense of potential loss of existing habitat. Habitat conservation planning is a mitigation program rather than a protection program. Furthermore, the whole concept of incidental take permitting through HCPs has been seen as a way of licensing what should not be done (i.e. killing endangered species).

Even after the advent of the "No Surprises" policy, there still existed a group of landowners whose disincentive to conserve habitat had not been addressed. This group included landowners who did not necessarily wish to develop their land, but whose land use activities were potentially subject to regulation under the ESA. The Federal government began development and implementation of Safe Harbor Agreements in 1995 to address this issue. This new tool was designed to improve the acceptability of the ESA to private property owners and to decrease the temptation to "shoot, shovel, and shut up" or to destroy habitat (Sheldon 1998). Some environmentalists see this as a weakening of the Act while some land rights advocates see it as a wolf in sheep's clothing. "The procedures for which the policies were adopted were subsequently challenged since the policies were not published in the Federal Register for notice and comment," (Lewis and Roca March 1998); however, a settlement was reached where proper procedure was adopted and the new changes survived.

The "No Surprises" policy and Safe Harbor Agreements have been in practice since 1994 and 1995 respectively. The No Surprises Policy did not officially become effective according to the Federal Register until March of 1998, whereas the SHA final rule was not published in the Federal Register until June of 1999. The goal of the Safe

Harbor program is to bring together traditionally polarized stakeholders by entering into voluntary, contractual, and cooperative agreements between the landowner and the FWS that provide benefits to both the landowner and the species (Lewis and Roca April 1998).

An SHA begins by determining baseline conditions on a site. Habitat management activities and duration are then defined and agreed upon. A landowner is then issued a permit allowing him / her make alterations to the property that fall under the definition of “take” with the baseline condition being the limiting factor³. The agreed upon habitat management activities are designed to provide benefits to the endangered species despite any potential “take” that may occur. SHAs are explained in greater detail in the sections of this paper that follow. What is important to note here is that SHAs create a variety of important new opportunities for non-governmental conservation organization to further the conservation of rare species in the future (Bean et al. 2001). Most importantly, these opportunities exist exactly where governmental regulatory efforts have had their greatest challenges, on the working landscape of privately owned farms, ranches, and forest lands (Bean et al. 2001). However, they have a relatively short history and, as such, have hardly been explored or proven.

³ There are three types of permits a landowner may apply for that allow for incidental take. Enhancement of Survival Permits Associated with Safe Harbor Agreements and Candidate Conservation Agreements under Section 10(a)(1)(B) of the ESA, Recovery Permits outside of SHAs under Section 10(a)(1)(B), and Incidental Take Permits Associated with Habitat Conservation Plans under Section 10(a)(1)(A).

Chapter 3

Safe Harbor Agreements

3.1. Content and Structure of Safe Harbor Agreements:

It is commonly argued that conservation strategies should emphasize the protection and restoration of natural habitats (Murphy et al. 1994). In order to accomplish habitat protection and restoration, conservation on privately owned land is a very important task (Bean and Wilcove 1997). One of the most significant advances in soliciting private land owner participation has been the transformation of the command and control model into a collaborative contractual model in which each actor, including private parties and environmental and resource agencies, take on enforceable obligations (Melious and Thornton 1999).

The reforms the agencies that administer the ESA (FWS and NOAA) have implemented in recent years represent the middle ground between eliminating land use restrictions and maintaining the status quo (Ruhl 1998). Before the advent of incidental take permitting via habitat conservation planning there was no possibility of making compromises with respect to Section 9 restrictions of the ESA. However, making compromises can be beneficial to private landowners, the FWS, and endangered species alike. With the addition of the “No Surprises” policy and Safe Harbor Agreements the opportunities to make mutually beneficial compromises increased. Safe Harbor Agreements seek to proactively create benefits for covered species (Kishida 2001). “The contractual obligation of agencies is necessary to encourage landowners to contribute

land and financial resources to long-term habitat protection not otherwise mandated by the ESA (Melious and Thornton 1999, pg. 2).”

Although the Safe Harbor concept is a relatively recent one, its origins go back to 1982, when Congress amended the ESA by creating a new Section 10 that was designed to allow certain exceptions to the take prohibitions where there had been none (Kishida 2001). The necessary components of a Safe Harbor Agreement are defined in the Safe Harbor policy available through the Federal Register. Part 5 of the Safe Harbor policy outlines the requirements an SHA must meet in order for a property owner to obtain an incidental take permit. There are eight points in Part 5 of the policy that must be addressed in a Safe Harbor Agreement. The Policy states that an SHA must:

- (1) Specify the species and/or habitats covered, including the habitat conditions, and identify the enrolled property covered by the Agreement;
- (2) Include a full description of the agreed upon baseline conditions⁴ for each of the covered species within the enrolled property;
- (3) Identify management actions that would accomplish the expected net conservation benefits⁵ to the species, where and when the benefits would be achieved, and the agreed upon time frames these management actions will remain in effect to achieve the anticipated net conservation benefits;
- (4) Describe any incidental take associated with the management actions during the term of the Agreements;
- (5) If appropriate, incorporate a notification requirement to the Services or appropriate State agencies with a reasonable opportunity to rescue individuals of a covered species before any authorized incidental taking occurs;

⁴ “Baseline conditions” means population estimates and distribution and / or habitat characteristics and determined area of the enrolled property that sustain seasonal or permanent use by the covered species at the time the Safe Harbor Agreement is executed between the Services and the property owner (64 F.R. 32722).

⁵ “Net conservation benefit” means the cumulative benefits of the management activities identified in a Safe Harbor Agreement that provide for an increase in a species’ population and / or the enhancement, restoration, or maintenance of covered species’ suitable habitat within the enrolled property, taking into account the length of the Agreement and any off-setting adverse effects attributable to the incidental taking allowed by the enhancement of survival permit. Net conservation benefits must be sufficient to contribute, either directly or indirectly, to the recovery of the covered species.

- (6) Describe what activities would be expected to return the enrolled property to baseline conditions and the extent of incidental take that would likely result from such activities;
- (7) Satisfy other requirements of section 10 of the Act; and
- (8) Identify a schedule for monitoring and the responsible parties who will monitor maintenance of baseline conditions, implementation of terms and conditions of the Agreement, and any incidental take as authorized in the permit. (64 F.R. 32723)

SHAs remove disincentives for nonfederal landowners willing to proactively conserve listed species by providing them with certainty against further regulation as a result of their activity (Lewis and Roca March 1998). The landowner may apply directly to the FWS, may be solicited through an intermediary, or may be contacted by any other nonfederal organization. Development of an SHA is not necessarily a top down process. Rather, it can be a cooperative effort that may employ consultation and technical support from the FWS, State agencies, independent scientists, and private conservation organizations. For example, FWS and / or other scientists may then help in the establishment of baseline biological conditions.

After baseline conditions are established the landowner may agree to maintain or enhance existing populations of the listed species; to create, restore, or maintain habitats; and / or to manage the land in a manner to benefit the species with respect to baseline conditions (Lewis and Roca March 1998). In return, the SHA is approved and the FWS assures the landowner that future activities will not be subject to ESA restrictions above those applicable to the property given the baseline conditions (Lewis and Roca March 1998). This essentially means after completion of the agreed upon management activities the landowner may return to baseline conditions without incurring further ESA restrictions. More specifically, “if a property owner meets all the conditions of a Safe Harbor Agreement, FWS will authorize the incidental take of covered species to enable

the property owner to return the enrolled property to its "baseline conditions" in the future (Sheldon 1998, pg. 4).” The benefit to the landowner is protection from greater land use restrictions.

It is important to note a subtle but important difference between SHAs and Habitat Conservation Plans. “Safe Harbor Agreements ... were developed under a different Section 10 provision, implementing Section 10(a)(1)(A), which states that ‘the Secretary may permit . . . any act otherwise prohibited by [Section 9] for scientific purposes *or to enhance the propagation or survival of the affected species*’ (Kishida 2001).” The 1999 publication in the Federal Register relocated SHAs from the incidental take permit provision that required an HCP to those mentioned above. SHAs can now exist outside of an HCP. Thus, the fundamental difference between HCPs and Safe Harbor Agreements is that HCP landowners are involved in the process by the necessity of having to obtain an incidental take permit while Safe Harbor participants are involved by choice (Kishida 2001).

Safe Harbor Agreements do not imply that one may protect now in order to destroy later (Sheldon 1998). The Safe Harbor Policy specifically states:

"all covered species would receive a net conservation benefit from management actions undertaken pursuant to the Agreement. Net conservation benefits must contribute, directly or indirectly, to the recovery of the covered species. This contribution toward recovery will vary and may not be permanent (64 F.R., 32723)."

Thus, the agreed upon management activities must provide either temporary or permanent benefits to endangered species before reverting back to baseline conditions.

The property owner is responsible for showing that baseline conditions were maintained and the activities in the Agreement were carried out for the duration of the

Agreement (Sheldon 1998). The species benefit because, among other things, habitat fragmentation rates may be reduced, unique habitats may be maintained/ restored/ enhanced, and habitat connectivity may be increased (Kishida 2000, Lewis and Roca March 1998). Safe Harbor Agreements must last long enough to achieve the hoped-for net conservation benefit. Depending on the species the requirements for net benefit are highly variable lasting a single season or many years (Kishida 2001).

SHAs are not static in that they may be amended contingent upon the agreement of the parties involved. A property owner may submit a request to the FWS that the SHA be amended if other endangered species appear as a result of the landowners' activity. The FWS and landowner can then add other species to the SHA with respect to the requirements set forth in the Safe Harbor policy. However, assurances in the Agreement may not be extended to a non-covered species, if such species were excluded from the original Agreement at the property owner's request or their presence are not directly attributable to the property owner's activities (Sheldon 1998, 64 F.R. 32724). In this case the landowner must bear the full weight of the ESA with respect to the species not covered, enter into a new SHA for that species, or enter into some other type of agreement such as a Habitat Conservation Plan. "Hence, landowners roll the dice by excluding species from coverage" (Kishida 2001, pg. 4).

Safe Harbor Agreements run with the land meaning SHAs transfer to new property owners if the property changes hands (Sheldon 1998). According to the Safe Harbor Policy, any new owner is regarded,

“as having the same rights and obligations with respect to the enrolled property as the original property owner if the new owner agrees to become party to the original Agreement... However, the new property owner would not be responsible for any provisions of the Agreement and would

not receive any assurances relative to section 9 restrictions, unless the new owner agrees to become party to the Agreement and permit.” (64 F.R. 32725)

A property owner must also inform notify the FWS of any transfer of property (Sheldon 1998).

While the FWS and the NOAA are the agencies responsible for the enforcement of the ESA, Safe Harbor Agreements can appear in a number of forms. The first and most obvious is the one in which the nonfederal landowner enters into an Agreement directly with the FWS or NOAA. However, other groups such as conservation organizations can act as intermediaries taking on the responsibilities of developing an SHA, recruiting landowners, offering technical support and presenting the Agreement to the FWS (Kishida 2001). This type of agreement is termed an umbrella agreement (Environmental Defense 1999). There is nothing in the Safe Harbor Policy that prohibits nonfederal governmental bodies to act as an intermediary. However, no individual landowner can be forced into a SHA by another entity.

The Agreement is essentially between the Federal government and the landowner. However, not every safe harbor program is limited to one parcel of land. In the case of many parcels, the SHA may come in the form of multiple documents. A generic document is necessary to explain the program, the target species, and may address purpose and need, geographic scope, funding, and similar components that can be applied to all parcels of land included in the SHA as shown in Appendix 3. Another document is needed to address the policy requirements that are specific to any one parcel of land and to define baseline conditions, agreed upon management activities, and any other stipulations specific to that parcel and the associated landowner. A third document may

be used as a “Certificate of Inclusion” which identifies the individual property, the participants, and the associated SHA as part of a larger safe harbor program, which is also shown in Appendix 3. Intermediary bodies may add stipulations to the contract but may not enforce anything over a landowner who did not enter into the Agreement. Intermediaries often serve as organizers, and may help administer the Agreement. Figure 1 shows the SHA development process.

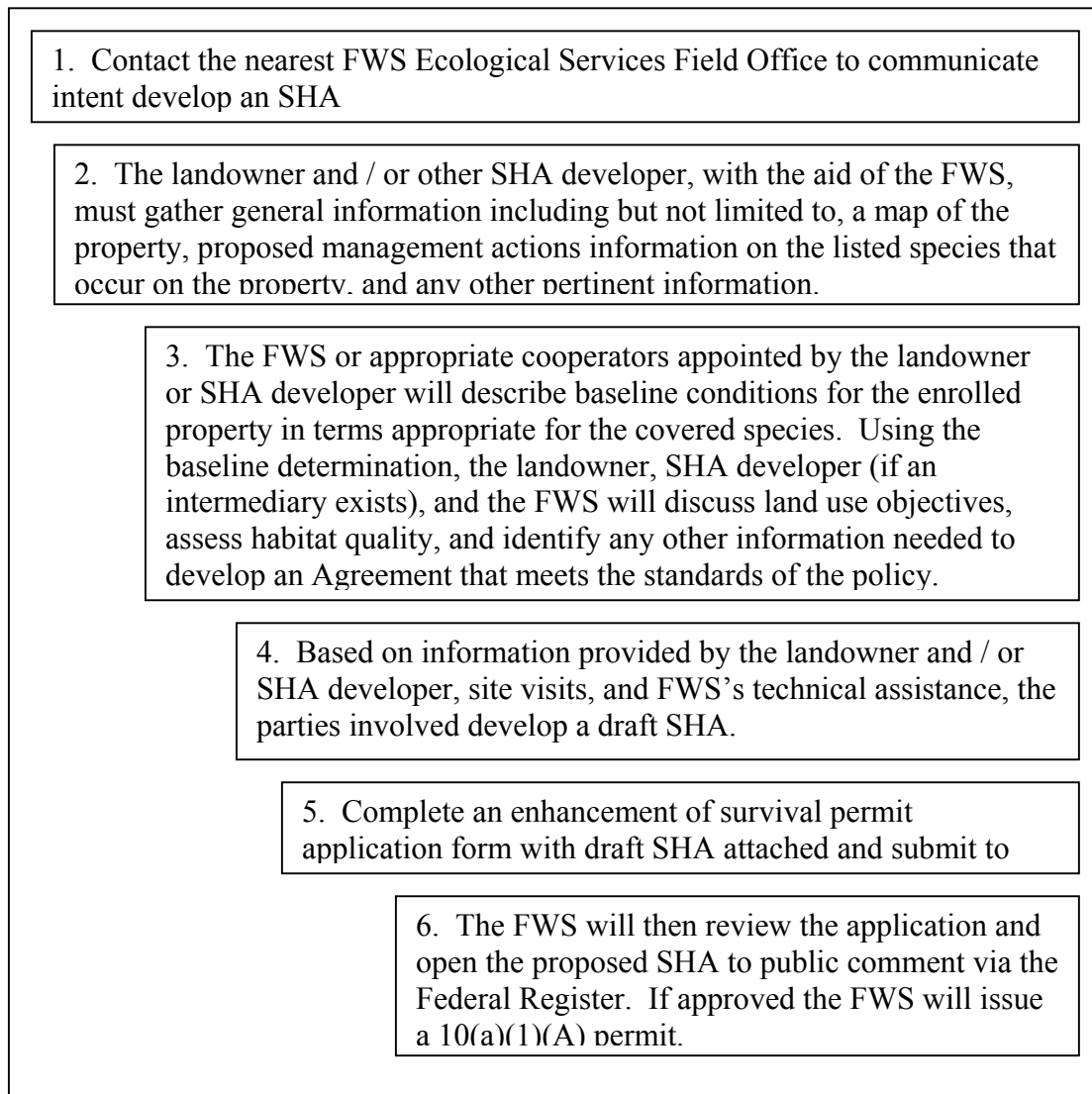


Figure 1. Steps for developing an SHA. Simple SHAs can be completed in 3 months while more complex SHAs take at least 6-7 months.

In summary, SHAs are agreements between landowners and the Federal government designed to provide a “net conservation benefit” to endangered species while protecting the landowners’ right to return to “baseline conditions”. An intermediary may administer SHAs in a type of agreement known as an umbrella agreement. The SHA development process is designed to be collaborative producing a mutually agreeable contract that defines each party’s responsibilities.

Chapter 4

The First Three Safe Harbor Agreements

4.1. Introduction to the Case Studies:

The case studies that follow describe the first three SHAs ever implemented. They are used to set a context for the discussion of weaknesses, strengths, and recommendations in the last two chapters. Each case study outlines the issues being faced by the endangered species in question, how the SHA came into being, and some of the notable effects of the SHA. Table 1 at the end of this chapter summarizes the three case studies.

4.2. The Carolina Sandhills Safe Harbor Agreement:

“The recovery of many endangered species is likely to be an unreachable goal without the active cooperation of private landowners (Bean et al. 2001, pg. 9).” Realizing this the FWS, along with Environmental Defense Fund (now known as Environmental Defense) and other agencies, organizations, and state foresters, developed the first Safe Harbor Agreement in North Carolina in 1995 to protect the red-cockaded woodpecker (*Picoides borealis*) (Kishida 2001).

In September of 1992, the FWS and U.S. Army co-hosted a conference at Fort Bragg to develop a long-term program for recovering the red-cockaded woodpecker in the North Carolina Sandhills (Hawkins 1995). The Carolina Sandhills population is the second largest of 15 populations identified in the FWS 1985 Red-cockaded Woodpecker

Recovery Plan. Unlike the other 14 populations, which are located on Federal land, this population is spread across a mosaic of private, State, and Federal lands including Fort Bragg (Campbell 1998). Before implementation of the SHA the local red-cockaded woodpecker population was falling 9% annually on private land (Kishida 2001). The conference focused on red-cockaded woodpecker needs on private lands and the necessity for a multi-agency effort to conserve this endangered species (Hawkins 1995).

This conference was followed by a meeting in March of 1993, convened by FWS biologists to establish a working group for the Sandhills red-cockaded woodpeckers composed of representatives from public agencies, conservation interests, community groups, and private landowners in region (Hawkins 1995). Diane Hawkins describes the event as follows:

One idea to encourage voluntary protection of the woodpeckers by private landowners was put forward by group member Marsh Smith. Smith is a member of the Sandhills Area Land Trust, a grass roots organization established to conserve woodland, other natural areas, and farmlands in the area. He suggested that private landowners may be persuaded to provide suitable habitat for endangered species if the FWS could assure them that they would not be penalized if later they decided to convert the land to some other use not necessarily favorable to the resident species. Smith's idea became known as the "Safe Harbor" proposal (Hawkins 1995).

Environmental Defense Fund attorney Michael Bean developed a set of possible approaches and met with FWS Atlanta Regional Office representatives. This led to the idea of using the HCP provisions of the ESA to accomplish the "Safe Harbor" result (Hawkins 1995). Michael Bean drafted the first SHA along with FWS biologists Janice Nicholls and red-cockaded woodpecker recovery coordinator Mark Cantrell. This HCP exists in the body of an HCP for the red-cockaded woodpecker in the Sandhills region. The SHA was submitted in February of 1995 (Hawkins 1995).

Secretary of the Interior Bruce Babbitt announced the North Carolina Sandhills Safe Harbor Habitat Conservation Plan on March 1, 1995, (Campbell 1998). When Brad Kocher, maintenance director at Pinehurst Resort and Country Club learned about the Safe Harbor assurances in the HCP he presented the idea to the Club. The Club management decided they wanted the Club to be the first to sign on to the agreement. On June 20, 1995, Pinehurst Resort and Country Club was the first entity to sign an SHA followed by a local landowner who owns approximately 2,000 acres of longleaf pine forest in the region (Williams 1996). However, there has been turbulence in building and implementing the “Safe Harbors” policy. Some landowners did not readily accept the safe harbor idea.

There are two landowners whose stories have been repeatedly recorded. These landowners are Ben Cone and Dougald S. McCormick Jr. Ben Cone inherited 8,000 acres in the Sandhills region and had been on television and Capitol Hill speaking out against the ESA. His property had been in the family since the Great Depression and had been inadvertently managed in a way that benefited red-cockaded woodpeckers. After the full effect of the ESA had been realized by Cone he clear-cut 600 acres the red-cockaded woodpeckers did not inhabit. According to Cone, in the absence of red-cockaded woodpeckers the property was worth \$1.6 million but was reduced to \$260,000 because of ESA restrictions on land use. He also filed a “takings” suit against the FWS. “Blackmail” is how Cone had described the Safe Harbor deal he was offered when Williams spoke to him on October 3, 1995. However, on October 18 of the following year he stated that by being “loud and vociferous” he had beaten the government and that “compromise” by signing the SHA would enable him to drop his suit. In his October of

1998 interview with Cone, Williams got the distinct impression that Cone no longer had any intention of clear cutting on his property even though that right is now protected to a certain extent (Williams 1999).

The family of Dougald S. McCormick Jr. owns 5,000 acres of commercial forestland in the Sandhills region and is known for his infamous license plate: “I EAT RCWS”. In 1992 he had attended a local red-cockaded woodpecker meeting called “Conservation or Confiscation”. Several months later McCormick attended the symposium at Fort Bragg. Since the symposium McCormick has signed on to the local SHA and was quoted as saying “I want to see this succeed ... with my Scotch blood, I’d hate to see this investment wasted,” (Williams 1996 and 1999).

At present 59 landowners have signed on to the SHA enrolling a total of 30,784 acres. Appendix 2 shows a map of the counties included in the SHA. On these lands there are 45 groups of red-cockaded woodpeckers, three of which are groups associated with Safe Harbor Agreements (Telephone interview with Peter Campbell of the FWS, April 2002). Red-cockaded woodpecker groups contain a breeding pair and up to seven offspring from past years that help rear new offspring. Three new groups could amount to as many as 27 individuals.

The working group formed in 1993 was intended to help in finding solutions to the problems plaguing the red-cockaded woodpecker. The most notable solution was to eliminate any new ESA restrictions from landowners willing to manage their land for the benefit of red-cockaded woodpeckers. This approach proved to be successful in soliciting private landowner participation. By doing so, thus far this SHA provided a new avenue for restoring and repopulating red-cockaded woodpecker habitat.

4.3. The Attwater's Prairie Chicken Safe Harbor Agreement:

In 1962, Congress authorized the Resource Conservation and Development Program (RC&D) through the Food and Agriculture Act of 1962. The purpose of the RC&D is to, “operate and maintain a planning and implementation process needed to conserve and improve the use of the land, develop natural resources, and improve and enhance the social, economic, and environmental conditions in rural areas of the United States” (16 U.S.C. 3453). Congress used the Natural Resource Conservation Service (NRCS) in the U.S. Department of Agriculture to administer the RC&D program. The RC&D programs are implemented through a network of non-profit organizations, partially funded by the Department of Agriculture (Woods 1999). The Safe Harbor Agreement for the Attwater's prairie chicken has its beginnings in an RC&D program.

The Sam Houston RC&D Council is located in Alvin, Texas. In the 1995 fiscal year the Sam Houston Resource Conservation & Development Area entered into a Challenge Cost-Share Agreement and a Grant Agreement with the FWS. The purpose of this program is to provide a source of funding to the RC&D for native Gulf Coast Prairie restoration activities. In such programs, the FWS shares the costs of management activities carried out by smaller entities. This became the stepping stone for the Attwater's Prairie Chicken SHA formally titled “Habitat Conservation Plan for Conservation of Endangered Species on Private Land in the Gulf Coast Prairies of Texas: A ‘Safe Harbor’ for Private Landowners”. The Attwater's prairie chicken SHA was approved in 1995. Extending “Safe Harbor” assurances would promote participation in the prairie restoration efforts. In fact, the stated purpose of the plan is to “encourage and

facilitate the restoration, conservation, enhancement, and maintenance of the historic Gulf Coast Prairies of Texas,” (Habitat Conservation Plan for Conservation of Endangered Species on Private Land in the Gulf Coast Prairies of Texas: A “Safe Harbor” for Private Landowners, pg. 1). From the beginning, the SHA was geared toward soliciting nonfederal landowner participation.

The Sam Houston RC&D Council administers a ten-county area of 10.7 thousand square miles and acts as an intermediary for the SHA. However, the HCP with Safe Harbor assurances applies to 19 counties that historically contained coastal/prairie habitat. Appendix 3 contains the agreement including a map of the counties covered in the agreement. More specifically targeted areas named in the plan are tracts within a 5-mile radius of certain known populations of the Attwater’s prairie chicken as well as several counties named in the plan. Like the previous SHA the Attwater’s prairie chicken SHA is embedded in an HCP. However, the Attwater’s prairie chicken SHA significantly departs from the red-cockaded woodpecker Sandhills model. The most drastic innovation is the explicit inclusion of multiple species, the Attwater’s prairie chicken (*Tympanuchus cupido attwateri*), the Houston toad (*Bufo houstonensis*), and the Texas prairie dawn-flower (*Hymenoxys texana*). This agreement is ecosystemic in its approach rather than focusing on an individual species. The multiple species approach inherently complicates the establishment of baseline conditions. Furthermore, a greater number of considerations have to be made in reverting back to that baseline conditions as well as the determination of what management activities will be included in the agreement.

Reaction to the Safe Harbor program from private landowners in the area has been very positive (Arey et al. 1998). As of 1998, 7 landowners in the designated counties had signed up for the program, promoting the restoration of about 15,000 acres of coastal prairie (Arey et al.). The magazine *Conservation Voices* announced the enrollment of 10,000 acres by landowner Bob McCain in the fall of 1999. While official management responsibilities only last 10 years, it is anticipated that participant's range improvements will continue for a longer period (Preisser and Yelin 1999). This SHA is very cost efficient to the FWS at an average restoration cost of less than \$15 per acre (Arey et al. 1998). The plan aims to enlist landowner as partners in a community where distrust of both "big government" and endangered species legislation, by actively utilizing the partnerships developed at the levels of the local NRCS and RC&D (Preisser and Yelin 1999). In addition to the Attwater's Prairie Chicken National Wildlife Refuge and the surrounding SHA program, captive breeding of the Attwater's prairie chicken has quickly become a vital part of the recovery effort by working to balance decline in the wild populations and serving a source for repopulation (Preisser and Yelin 1999).

Despite conservation efforts, the Attwater's prairie chicken continues to decline in the wild and would be extinct were it not for continual infusions of captive-bred birds (Preisser and Yelin 1999). Historically, nearly one million Attwater's prairie chickens were distributed throughout 2.5 million hectares of coastal prairie habitat in Texas and Louisiana (Lehmann 1941 cited in Preisser and Yelin 1999). There was an estimated 68 wild individuals in Texas during the year of 1995 when the SHA was forged and since then the total wild population has fluctuated between a high of 56 and a low of 42. There are easily more Attwater's prairie chickens in captivity than in the wild. However, given

that there were an estimated 456 birds in the wild in 1993, that any birds exist in the wild at all may be a testament to the efforts that have been made (Kishida 2001). Regardless of population trends, 97% of Texas is in private ownership. The recovery plan states that habitat loss and degradation are the main causes of Attwater's prairie chicken decline (Preisser and Yelin 1999). With this in mind it becomes clear that Federal lands alone cannot ensure the continued existence of the Attwater's prairie chicken.

Outside of purchasing land for the Attwater's prairie chicken, incentive programs and Safe Harbor Agreements presently seem to be the only way to bring the acreage under management necessary to stabilize the decline of the Attwater's prairie chicken, much less bring them to a level where they can be delisted. In addition, many authors regard the forging of partnerships in Texas as a success in itself. Terry Rossignol, Attwater's Prairie Chicken National Wildlife Refuge Manager, has stated, "you couldn't say ESA and private landowner in the same sentence" and that landowners have completely changed their opinions from those they held prior to "Safe Harbors" (Kishida 2001). Furthermore, the status of the Attwater's prairie chicken should not discount the increase in participation and associated acreage enrolled in coastal prairie habitat, which coincides directly with the stated purpose of the SHA.

4.4. The Northern Aplomado Falcon Safe Harbor Agreement:

The number of aplomado falcon (*Falco femoralis*) egg sets collected in south Texas between 1890 and 1915 was greater than of the white-tailed hawk and the crested caracara, which remain common today (Peregrine Fund 2002). However, the last known successful nesting of northern aplomado falcons in Texas took place in 1941 (Bean et al.

2001). The aplomado falcon was last recorded in the United States near Deming, New Mexico in 1952 (Peregrine Fund 2002). Nonetheless, it appeared to the Peregrine Fund that suitable habitat was still in existence. In 1977 the Peregrine Fund decided to develop a captive breeding program for the aplomado falcon, beginning with the use of wild specimens from Mexico.

The aplomado falcon is difficult to breed in captivity but within three years there were enough falcons for biologists to begin experimental releases (Bean et al. 2001). The initial release site was on privately owned property. However, reintroduction efforts became complicated when the northern aplomado falcon was listed as an endangered species in February 1986. The Environmental Protection Agency (EPA) later signaled its intention to prohibit several pesticides widely used on cotton in Texas. As a result private landowners became resentful of Federal intrusion. During a telephone interview in the summer of 2001 a representative of the Peregrine Fund stated the issue in plain terms: “We could not give these things away.” Between 1978 and 1996, releases were geographically limited and only totaled 130 birds over 17 years (Bean et al. 2001, Peregrine Fund 2002).

The frustrations that limited where the birds could be safely released were compounded by the fact that they did not disperse as widely as was expected. The birds released on Matagorda Island of the Matagorda National Wildlife Refuge stayed there. Only so many individuals can be released onto a site before they start causing problems for each other such as aggression from established pairs (Peregrine Fund 2002, Bean et al. 2001). Even if they had dispersed off Federal land, cooperation from local landowners was necessary for recapture and testing of pesticide levels in their blood

(Bean et al. 2001). As public land reached its capacity to accommodate more birds it became necessary to seek out privately owned land.

The Peregrine Fund took interest in SHAs after the first agreement was announced in 1995. The SHA for the reintroduction of the aplomado falcon was announced in June of 1996, a map of which is shown in Appendix 4. With the approval of the FWS, it was launched December of the same year making it the third SHA ever. Like the previous two case studies, the aplomado falcon SHA exists within the context of an HCP. It is unique in that the baseline population number for most, if not all, landowners is zero. The Carolina Sandhills SHA does not explicitly employ introduction of captive bred birds. The Attwater's prairie chicken SHA relies on both, captive bred and wild populations to recolonize habitat. The aplomado falcon SHA would have been ineffective without utilization of captive bred birds because habitat management alone could not bring aplomado falcons to Texas.

The Peregrine Fund proved to be an essential intermediary in that the local landowners do not readily accept the presence of FWS staff (Bean et al. 2001, Kishida 2001). Within two years of its inception more than one million acres were enrolled in the program. In the six years since the SHA has been in practice 672 birds have been released as opposed to the 130 in the first 17 years of the captive breeding program (Peregrine Fund 2002). A table and graph of aplomado falcon's recovery are contained in Appendices 5 and 6 respectively. This SHA has been irrefutably successful in increasing aplomado falcon population numbers in the United States. The reintroduction program proved to be so successful that the original SHA was amended in June of 2000

to include an additional 42 counties. The question to be answered is what can be learned and applied to making other SHAs successful.

Case Study Summary			
Title	North Carolina Sandhills Red-Cockaded Woodpecker	Gulf Coast Prairies (aka Coastal Prairie Conservation Initiative)	Aplomado Falcon “Safe Harbor”
Status	The permit was administratively amended to transfer from “species recovery coordinator” to “Sandhills coordinator”.		The incidental take permit was amended 6/2/2000, adding 42 additional counties for reintroduction of aplomado falcons expanding the ability of the Peregrine Fund to work with additional willing private landowners.
Date Implemented	6/20/1995	11/-/1995	12/16/1996
Location	The Sandhills region of North Carolina including all or parts of Cumberland, Harnett, Hoke, Moore, Richmond, and Scotland counties.	19 counties in the central coastal plain of Texas	15 counties along the southern Texas Gulf coast
Habitat	The Sandhills region consists of a variety of plant communities both wet and dry. Wetlands range from small springs and seeps to swamp forests. Streamhead pocosins are particularly abundant in the Sandhills. Upland areas are generally dominated by the longleaf pine community type. Other pine species that are dominant and / or canopy associates with longleaf pine include loblolly pine, slash pine, and pond pine.	Coastal prairie	grasslands and coastal prairies
Size (Total Area Covered As Opposed To Area Enrolled)	approximately 30,784 enrolled	10,138,432 acres covered by the 19 counties	50,234,295 acres covered
Land Use	forest management activities, agricultural, recreational activities	agricultural, non-commercial, ranching, recreational activities	agricultural, non-commercial, ranching, recreational activities
Duration	99 years	10 years	99 years

Table 1. Adapted From the U.S. Fish and Wildlife Service Environmental Conservation System Online Database. Access Available Through: <http://www.fws.gov>

Chapter 5

Weaknesses and Strengths of SHAs

5.1. Introduction to Weaknesses and Strengths of SHAs:

SHAs should not be blindly accepted as a panacea for the difficulties in implementation of the ESA. An SHA that does not provide a net conservation benefit for the target species is not fulfilling its overall purpose (Kishida 2001). Since the oldest SHA is only seven years old, progress is hard to measure. For instance, the red-cockaded woodpecker creates its nesting cavities in pines that are approximately 80 years old. How much time will pass before management activities provide a benefit to red-cockaded woodpeckers? Will there continue to be a local population to reap the benefits of management activities? Attwater's prairie chicken populations have yet to rebound and the population numbers continue to rely heavily upon captive bred birds. Their weaknesses should be weighed equally against their strengths with the needs of the target species in mind.

5.2. Weaknesses of SHAs:

SHAs are no panacea and even environmental groups contend that the concept is still in the experimental stage and that it should be approached with caution (Kishida 2001). SHAs have yet to be empirically tested. In fact, the form of SHAs as well as the needs and circumstances surrounding the endangerment of species are so variable that there may not be any uniform test for the "Safe Harbor" program. SHAs can only be

tested against their goals. However, before ever being implemented, critics had established several concerns that were recognized and addressed in the final policy document. Two of these concerns deal with the operational definitions of terms used in the Safe Harbor policy such as “net benefit” and “baseline conditions”.

Public comments to the Safe Harbor policy note that the concept and determination of baseline conditions are not a perfect. Different parties can have different opinions on what the baseline conditions are. The Agencies’ (FWS and NOAA) response notes that their intent in determining baseline conditions is to ensure that the protection provided to covered species is not eroded below pre-SHA levels and to provide participating landowners with a clear understanding of their assured rights.

Another problem with determining baseline conditions on number of individuals occupying or using enrolled lands is that populations naturally fluctuate. Baseline conditions based on the numbers of individuals in a peak or trough year misrepresent the state of nature. An overestimated baseline condition can overburden the landowner with standards that cannot be reproduced. An underestimated baseline condition can undermine protections that would otherwise be afforded to endangered species. The Agencies designed the process to be collaborative in order to deal with this issue. By requiring that the baseline conditions be mutually agreed upon, each stakeholder has an opportunity to protect its interests. Furthermore, existing habitat acreage and condition can be used in place or in combination with population numbers to make the determination of baseline condition more robust. Finally, known or expected variation in population numbers should be described in the SHA and will contribute to the determination of baseline condition.

In the case of the aplomado falcon SHA, the falcons had been extirpated from the area. Therefore, the actual baseline population before reintroduction began was zero. Consider the issue of the baseline habitat condition. The Peregrine Fund made the determination that suitable habitat existed. How should habitat be incorporated into the equation in the absence of a resident population of falcons?

A landowner might feel very strongly against setting a high baseline habitat condition in the absence of the of the aplomado falcon. Without the species being present, the landowner is not subject any land use restrictions under the ESA. If the baseline habitat condition is set high, the landowner would be obligated not to make any alterations to the landscape that would reduce the amount of habitat available for the falcon, potentially incurring a great deal of restrictions on land use. However, there is potential for the aplomado falcon to disperse from release sites into areas not enrolled in an SHA. When individuals of a species begin to colonize new areas they bring with them the full weight of the ESA and incentive for landowners to contractually protect their land use. If this incentive is displaced by the restrictions associated with baseline conditions a landowner may be opposed to entering into any agreement. Determining mutually agreeable baseline conditions must be a sound process based on knowledge and information, not a negotiation.

The political and scientific overtones associated with baseline conditions are inseparable. In Texas, it matters to the landowners which entities will be allowed access to their land. Texas landowners distrust Federal entities and their determinations. Therefore, the Peregrine Fund and the Sam Houston RC&D played critical intermediary

roles in the aplomado falcon SHA as well as the Attwater's prairie chicken SHA, respectively.

“Net benefit” is more difficult to operationalize than “baseline condition”. In the case of “baseline condition” one seeks to determine the condition with respect to the included species, before the agreement comes into play. While supporting the “net benefit” standard, critics argue different interpretations of the meaning of “net benefit”. Therefore, the Safe Harbor policy explicitly states what constitutes “net benefit.

“Net benefit” is not inherently attached to any time frame and is surely dependant upon the agreed upon management activities as well as the species in question. Furthermore, “net benefit” to the species on the enrolled property may be influenced by activities outside the enrolled property. Keep in mind that the “net benefit” stipulation one that requires the parties involved to speculate as to what the results of agreed upon management activities will be. The “net benefit” criterion is one that has to be met on paper for the agreement to be approved and implemented. It is not outside the realm of possibility that the agreed upon management activities will not provide the speculated benefit.

For the Attwater's prairie chicken, net benefit has yet to be proven. It is true that more land is under management for the benefit of the Attwater's prairie chicken than would otherwise have been. However, despite captive breeding / release programs and management, population numbers have yet to climb. The condition for the Attwater's prairie chicken is as severe as it ever has been. The duration of the SHA for each parcel enrolled is defined in each individual agreement signed. Each certificate of inclusion into the Attwater's prairie chicken SHA lasts 10 years but different landowners enter into the

SHA at different times. It is possible for the term of agreement to expire on a certificate of inclusion before any net benefit could be achieved. On the other hand it is only fair to point out that though habitat may not be utilized to its fullest potential by the Attwater's prairie chicken, the potential to use that habitat may not exist without the SHA. Creating that potential is one of the fundamental reasons for Safe Harbor programs. Landowners who choose not to enter into an SHA risk ESA land use restrictions if the Attwater's prairie chicken population grows.

Many of the hypothetical situations used to demonstrate how "net benefit" may not be achieved are associated with the concept population sink. The population sink effect occurs when newly restored habitat is altered to the degree that it is no longer habitable and the old habitat has since changed or is otherwise not reused. The population then goes into decline creating the sink effect. Stochastic events, such as storm events and dramatic fire can alter preexisting habitats forcing an endangered species into habitats created under an SHA. If the property is returned to baseline conditions before the old habitat is reestablished the effect is a population sink.

To exemplify the population sink concept, take cavity trees used by red-cockaded woodpeckers. The softness of the fungus-infected wood that makes them useful to red-cockaded woodpeckers also makes them susceptible to wind damage, especially after the cavity has been hollowed out. Coastal storms that move inland from Carolina shores can snap long established cavity trees forcing red-cockaded woodpeckers into nearby habitats being created under SHAs. Meanwhile, the landowners' rights to return to "baseline conditions" are protected in a contractual agreement. If landowners choose to exercise that right, the population sink effect is created. The Safe Harbors policy does state that

the landowner has to notify the FWS of intent to return to “baseline conditions” so that individuals of endangered species can be rescued. However, the Safe Harbors policy offers no mechanism to stop that transition.

There are land rights advocates who fear the potential of being “forced” into an SHA. The word “forced” is not meant literally, rather, “forced” refers to choosing the least unfavorable of two or more unfavorable options. A landowner’s neighbor(s) who enter into an SHA increase the likelihood of attracting endangered species to the vicinity. In order to maintain a degree of land use freedom, the landowner has the option of altering his / her property to insure endangered species will not be attracted to the parcel or signing onto an SHA and accepting the baseline condition restrictions. Landowners who do not like either option, tend to disagree with the Safe Harbor policy as a whole because it jeopardizes their land use freedoms.

5.3. Strengths of Safe Harbor Agreements:

Advocates list the many benefits of SHAs such as the reduction of habitat fragmentation, the maintenance, restoration, or enhancement of existing habitats, and the increase in habitat connectivity (Kishida 2001). However impressive a laundry list of strengths may be, the profound weight of some of the innovations made in the Safe Harbor policy may serve as a better measure. Past “take” exceptions have been allowed through mitigation of incidental take. A great innovation in the Safe Harbor policy is its proactive nature in that the purpose of SHAs is to increase endangered species habitat rather than mitigate habitat loss.

Before the Safe Harbors policy the ESA failed to adequately address landowners who may have wanted to manage for endangered species. Many landowners who would like to maintain their current land uses as well as manage for endangered species were conflicted because of the risk incurring land use restrictions and losing the economic utility of the land. Even though the ESA has a protective purpose, some effects were opposite of the intent of the ESA. Now, landowners who would like to manage for endangered species have a type of land use insurance in that they have the opportunity to manage for endangered species without being burdened by the full weight of the ESA. Furthermore, SHAs offer something new to bring to the negotiating table for governmental and non-governmental organizations soliciting support from private landowners.

Traditionally, if a nonfederal entity wanted to promote endangered species management there were only so many avenues that could be pursued, some of which came at great expense. Furthermore not all conservation activities increase the quantity of land under management. Some tasks undertaken by conservation organizations include: education in hopes of promoting awareness and thus sensitivity, land acquisition, and watchdogging / litigation. Captive breeding / release programs increase population numbers but not habitat acreage. Purchase of development rights and conservation easements have also proven complicated, costly, and limited in number of willing participants. SHAs are a proactive tool that can be initiated by an individual, groups of landowners, intermediary groups, and the FWS alike. As such, private conservation organizations have taken on the role usually assumed by a governmental agency in

extending safe harbor assurances to landowners through a permit issued by FWS to the intermediary (Bean et al. 2001)

Another strength of SHAs is that they are not necessarily burdensome or costly. The landowner can take an active role in determining what acreage will be enrolled in the agreement, the duration, and what activities will be carried out or avoided. The agreement can be tailored to the landowner's ability. Furthermore, some SHAs have provisions for financial and technical support from the FWS. Thus, the conservation conundrum for private landowners can be reduced to a matter of convenience.

5.4. Summary:

In review of the case studies offered in this paper, one may find that the Attwater's prairie chicken SHA has made least progress in achieving its goals. This raises questions as to whether an SHA is the right tool for the job or if there is a flaw in its design. The issue at hand is complicated by a lack of reproductive success in the wild and disease. Fluctuation in this species' population numbers cannot be directly attributed to the SHA. Until Attwater's prairie chicken populations increase, particularly on enrolled lands, it cannot be said that the SHA is achieving its objective with respect to the Attwater's prairie chicken. It is clear that the SHA alone will not ensure the continued existence of the Attwater's prairie chicken. However, the Challenge Cost Share Agreement along with the SHA have galvanized the relationships that are necessary for the captive breeding program to be effective. Vice versa, the success of the captive breeding program is dependent upon the availability of habitat to reintroduce the species.

The greatest benefit to the Attwater's prairie chicken has been productive partnerships. There are three major activities in progress in the area of the Attwater's prairie chicken SHA. One is the active management of the Attwater's Prairie Chicken National Wildlife Refuge, which is necessary to maintain the existing population. Second is the implementation of the SHA on private land. Third is the captive breeding / release program. The three activities are codependent. The Attwater's prairie chicken is unlikely to survive without the three activities working simultaneously. Thus, the partnerships formed through the Attwater's prairie chicken SHA are essential to the success of the three activities.

The most obvious benefit for the red-cockaded woodpecker in the Sandhills region is the restoration of habitat. Before "Safe Harbor" assurances, landowners like Ben Cone and Dougald McCormick Jr. openly expressed malevolence for the ESA. Ecosystems are not static. The prevention of the maturation of pine stands on Ben Cone's property would have eventually led to the disappearance of the red-cockaded woodpecker from his property as soon as their present habitat underwent a significant level of natural changes. Not only is present habitat being actively maintained, SHA participants are restoring more habitat by virtue of the agreed upon management activities, allowing the existing population to grow. The benefits to the red-cockaded woodpecker may be short-lived or long lasting. However, SHA advocates point out that the benefits would not exist at all without the SHA.

The Sandhills SHA alleviated some of the severity associated red-cockaded woodpecker habitat loss. However, the future of the red-cockaded woodpecker continues to depend upon conscious management for their benefit. Thus, the relationships forged in

the creation of this SHA will continue to be essential. It is difficult to criticize this SHA, in particular because of the manner in which it brought together stakeholders that would otherwise continue to be polarized. Overcoming this polarization continues to be vital to soliciting voluntary cooperation from landowners in the area. Without the continued cooperation from landowners in the area, the red-cockaded woodpeckers will not exist in the area for future generations. As such, the SHA must have the longevity to (1) allow the red-cockaded woodpecker population to benefit from management activity and (2) assure that sufficient red-cockaded woodpecker habitat exists for the species decline to be reversed.

The aplomado falcon SHA has probably been the most effective of the three examined in this paper. Habitat on private land is critical for this species. Furthermore, Federal agency relationships with private landowners in the region can be tenuous. Future removal from the endangered species list is a real possibility in this case. However, the successful reintroduction of the bird to southern Texas has been, and still is, absolutely dependent upon the SHA. Many of the land uses practiced in the area are not entirely incompatible with reintroduction efforts. However, if “Safe Harbor” assurances expire prematurely without the possibility of continuance, disincentives will surely return and the cooperation of many landowners will be lost. Thus, it is almost definite that SHAs will continue play a critical role in maintaining landowner cooperation until the species is removed from the endangered species list. This carries a long-term burden on the Peregrine Fund who administers the SHA jointly with the FWS.

The aplomado falcon SHA is successful by many standards, but what are its strengths? Relationships between the Federal government and local landowners are as

difficult in this case as any other. The Peregrine Fund noticed that significant habitat was already in existence. The “Safe Harbor” assurances, in themselves, seem to be the greatest virtue of the SHA. These assurances allowed for the Peregrine Fund to be successful in their release program. The agreed upon management activities in the SHA also assured that land management practices will help maintain if not restore aplomado falcon habitat. Of course, the Peregrine Fund working as an intermediary is viewed as a successful partnership as well. The elusiveness of the strong points in one of the more successful SHAs is ironic. This elusiveness may arise because many of the elements that other SHAs struggle towards were already in place. The Peregrine Fund needed two simple things to make the aplomado falcon SHA successful. The Peregrine Fund needed the consent of landowners to release captive bred birds and assurance from the FWS that the ESA would not be enforced against them.

While the proactive nature of SHAs may be a great innovation in the ESA, overcoming opposition from landowners who fear the ESA may be the greatest strength of the Safe Harbor policy. It has to be understood that in most cases, the ESA is ineffective unless land can be brought under management and recolonized by endangered species. Very little can be done in bringing back endangered species without the participation of private landowners. Specifically, more habitats cannot be restored for target species to colonize and captive bred animals cannot be released into existing habitat on private lands. These two aspects are critical to reversing downward population trends in endangered species, especially in light of the rate at which species are being added to the endangered species list. Public lands will not suffice in maintaining endangered species populations, much less in increasing populations. When this

realization is made one understands the importance of the progress SHAs have made in soliciting landowner participation.

Participation goes hand in hand with partnership. Conservationists need as healthy an appreciation for the goals of landowners as that of landowners for the goals of conservationists. The goals of the ESA and those of private land managers are not always mutually exclusive, however, the means in achieving those goals often been conflicting. When the polarization between conservation organizations, the Federal government, and private landowners dissolves, mutually beneficial land management solutions can often be reached. “Safe Harbor” assurances prove to be instrumental in neutralizing polarization and building partnerships.

Chapter 6

Conclusions and Policy Recommendations

6.1. Conclusions:

Since the introduction of the contractual model in ESA implementation, the ESA has moved away from the “bright line rule” it once was. Changes made to the ESA may be confusing and frustrating to some who are not well learned in its intricacies. For others, the ESA now serves as a toolbox with different tools for different jobs. The most recent and innovative tool in the ESA toolbox is the SHA. Like any one tool, SHAs have strengths and weaknesses and are suited to certain tasks.

In determining the function of SHAs, one must look to its design. The Safe Harbor policy derives its design from the issues plaguing the red-cockaded woodpecker in the Sandhills region of North Carolina. More specifically, SHAs address the disincentive to manage land for endangered species due to the fear of the land use restrictions in the ESA. The solution alleviates the ESA restrictions so long as baseline conditions are maintained. However, this solution has far reaching implications.

Landowners may now place land into conservation without jeopardizing the freedom to use that land as they choose in the future. Also, the Federal government and conservation organizations alike hold a new tool to proactively solicit cooperation from private landowners. At present, Federal lands, such as national forests and wildlife refuges, represent protected areas critical to the continued existence of many endangered species. The situation can be likened to having too many eggs in one basket. As more private land is put under management, the burden on Federal land is not as severe and

endangered species populations become more robust against the threat of extinction. The Safe Harbor policy provides a new means towards that goal. However, critics point out important issues that should be taken into consideration.

Some landowners fear SHAs and land use restrictions in general. These landowners dislike the prospect of accepting baseline condition restrictions in order to protect the rest of their land use freedoms. Not only do these landowners dislike SHAs for themselves, they dislike the use of SHAs on neighboring properties because of potential for dispersal of endangered species on to their own properties. Other conservation-oriented critics' support the proactive nature of the Safe Harbor policy but express concerns such as the legal definitions of "net conservation benefit" and "baseline conditions". Some voice concerns over the operationalization of these terms.

Some conservationists argue that "net conservation benefit" should be measured in terms of population increase rather than less quantifiable terms such as habitat connectivity and quality. Determination of "baseline conditions" is a process that can yield varying results depending on the parties involved, and as such, raises questions for both land rights advocates and conservationists.

Development and implementation of SHAs ultimately entails a collaborative planning process. Stakeholders come together to develop mutually beneficial means to preserve potentially differing interests. The collaborative approach provides the key in assuring that all interests are well represented in an SHA. Through consultation and technical support the FWS has an opportunity to for input. The SHA developer, be it an individual landowner or intermediary also influences what lands will be enrolled, what

activities will take place, which party is responsible for monitoring, and whether they serve as a partner in determining agreed upon baseline conditions.

6.2. Policy Recommendations:

An SHA relies on certain elements for success. Without these elements the SHA could create negative effects such as a population sink or resentment from landowners. These elements include scientific understanding, a feeder population, space, and landowners open to the “Safe Harbors” concept.

An understanding of the needs of any given species is essential to the stabilization and recuperation of the population. Without understanding the habitat needs of an endangered species, no amount of space ensures the continued existence of that species, especially if competing interests exist in that space. For example, Texas rangelands can often accommodate livestock and species like the aplomado falcon and the Attwater’s prairie chicken if certain management activities are undertaken and others avoided. However, poor range management has ruined many an acre for wildlife as exemplified by the plight of many rangeland species. The absence of reliable information regarding what management activities to undertake and the results of those efforts could cause frustration and resentment for all stakeholders involved. Furthermore, good science proves critical to any captive breeding and release program. This principle applies to the reproductive requirements of captive animals, animal husbandry, and the behavior of animals after release

Science also plays a key role in ensuring a population exists to take advantage of habitat improvements. Such a population may take the form of a core population that is

expected to disperse into improved habitat as in the case of the Sandhills SHA and the Attwater's prairie chicken SHA. For example, Safe Harbor Agreements in the vicinity of existing populations of endangered species create buffers that extend the limit of habitat for populations of endangered species. If a core population does not exist, captive breeding or relocation of wild individuals must be employed to colonize newly improved habitat as was the case for the aplomado falcon. In other words, habitat improvement fails to aid a species in the absence of the species the habitat is managed for.

Ample space is obviously important but it requires explanation. Spatial configuration of habitat influences habitat utilization and the capacity to support populations of endangered species. This criterion implies that a landowner must have enough space for management activities to provide a "net benefit" for a target species. Otherwise, multiple landowners must be enrolled in the SHA in order to create the effect of habitat connectivity in the eye of the target species. A single small landowner may not be an appropriate candidate for an SHA in many cases unless the landowner is adjacent to a more expansive unit of habitat. SHAs may not be tailored for every set of possible circumstances. On the same note, the space may exist with potential for the appropriate habitat improvements. However, if not enough landowners are willing to sign on to an SHA to provide habitat connectivity between individuals or populations, the SHA may fail. Lack of connectivity results in pockets of uninhabited habitat or populations that are essentially isolated from each other. This restriction hinders the reproductive success of species that do not disperse across areas without appropriate cover.

The "Safe Harbors" policy statement and Karin Sheldon (1998) both note circumstances in which SHAs should not be used. SHAs should not be used when

landowners seek immediate take authorization or when net conservation benefits cannot be achieved, after considering the return to baseline conditions. Such practices negate the intent of the Safe Harbor policy by causing population declines of endangered species. Furthermore, any landowner seeking immediate take authorization is probably engaged in some development or resource extraction activity that would be better addressed via incidental take permits associated with habitat conservation planning. “Safe Harbor” assurances should not be used if the Agreement only redistributes the existing population of a listed species, or attracts species away from a habitat that enjoys long-term protection (Sheldon 1998). Simply put, “net benefit” is a prerequisite to “Safe Harbor” assurances necessary to maintain the integrity of the policy as a whole.

SHAs provide a good tool for overcoming the tensions and apprehensions of landowners. Stipulations and provisions can be written into contractual agreements to address the worries of individual landowners. Such contractual agreements play a pivotal role for reintroduction of contentious species on private property such large carnivores. As enforceable contracts, SHAs maintain the goals of the parties involved while reducing risks associated with partnerships. The benefit exemplifies the potential for use in reintroducing rare species to sites from which they have long been extirpated, which may be preferable to utilizing the “experimental population” provision in the ESA (Bean et al. 2001).

Outside of purchasing land, SHAs may be the best method for the Federal government to bring private property into endangered species management. As existing habitat is depleted, the management of private land for endangered species becomes increasingly imperative for the maintenance of endangered species populations. Before

most species can be removed from the endangered species list, the quantity of habitat under management needs to not only be maintained but also expanded upon. The only other provision in the ESA that could proactively increase land under management is that which grants the Secretaries of Interior and Agriculture the authority to acquire land for the purposes of the ESA (16 U.S.C. 1534). The Federal government is not capable of purchasing and managing enough land to satisfy the needs of all threatened and endangered species. Given the tools in the ESA toolbox, SHAs may prove to be very useful in moving closer to the goals of the ESA.

The Safe Harbor policy can be improved upon. A more systematic method or criterion for establishing “baseline conditions” would reduce the subjectivity in the determination of baseline conditions. This clarity would also relieve the tensions of conservationists and land rights advocates who view the determination of “baseline conditions” as potentially biased. The definition of “net conservation benefit” could also be refined to impose some sort of minimum benefit that would warrant incidental take.

At present, SHAs are very new and knowledge about how to use of SHAs is limited. Empowering the FWS to solicit appropriate candidates for participation would enable the FWS to bring more land under management for endangered species and spread knowledge about SHAs. For example, National Wildlife Refuge managers who manage endangered species on their sites should also have a mechanism to develop SHAs and solicit participation from surrounding landowners. Safe Harbor Agreements could help refuge managers build buffers, deal with encroaching development around refuges, and extend the managed habitat network beyond the limits of wildlife refuges. At present the FWS does not develop their own SHAs or solicit participation in SHAs. The FWS only

participates in the development of agreements, evaluation of SHA applications, and in some cases monitoring the SHAs.

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Appendix 1

Major Dates in Endangered Species Act Legislation

Major Dates in Endangered Species Legislation

- ❖ 1966 – Endangered Species Preservation Act: The first Federal Law addressing endangered species
- ❖ 1969 – Endangered Species Conservation Act: Expands protections to species in danger of worldwide extinction including invertebrates and prohibits importation of such species
- ❖ 1973 – Endangered Species Act of 1973: Regulates all those subject to the jurisdiction of the United States with respect to endangered species
- ❖ 1978 – Tennessee Valley Authority v. Hill and Endangered Species Act Amended
 - June 15: TVA v. Hill decided
 - November 10: President Carter signs ESA amendments into law with the following changes:
 - Provisions were added to Section 7, allowing Federal agencies to undertake an action that would jeopardize listed species if the action were exempted by a cabinet-level committee convened for this purpose (The “God Squad”)
 - Critical habitat was required to be designated concurrently with the listing of a species, when prudent, and economic and other impacts of designation were required to be considered in deciding on boundaries
 - The Secretaries of Interior and Agriculture were directed to develop a program for conserving fish, wildlife and plants, including listed species, and land acquisition authority was extended to such species
 - The definition of “species” with respect to “populations” was restricted to vertebrates; otherwise, any species, subspecies or variety of plant, or species or subspecies of animal remained listable under the Act
- ❖ 1981 – February 9, Palila v. Hawaii Department of Land and Natural Resources Decided
- ❖ 1982 – Endangered Species Act Amended
 - Species listings were required to be made solely on the basis of biological and trade information, without any consideration of possible economic or other effects
 - A final rule to determine the status of a species listing was required to follow within one year of its proposal unless withdrawn, essentially establishing time tables to ensure that petitions for listing were dealt with expeditiously

- Procedures adopted for consultation process
 - Specified that good faith actions taken by a private entity to minimize “takings” may be exempted from the prohibition against incidental takings
 - Incidental take permitting and habitat conservation planning introduced
 - Provision was made for designation of experimental populations for the recovery of a listed species that could be subject to different treatment under section 4, for critical habitat, and section 7
 - A prohibition was inserted against removing listed plants from land under Federal jurisdiction and reducing them to possession
- ❖ 1988 – Endangered Species Act Amended
- Monitoring of candidate and recovered species was required, with adoption of emergency listing when there is evidence of significant risk
 - Several amendments dealt with recovery matters: 1) recovery plans will undergo public notice and review, and affected Federal agencies must give consideration to those comments; 2) section 4(g) requires five years of monitoring of species that have recovered; and 3) biennial reports are required on the development and implementation of recovery plans and on the status of all species with plans
 - A new section 18 requires a report of all reasonably identifiable expenditures on a species – by – species basis be made on the recovery of endangered or threatened species by the States and the Federal government
 - Protection for endangered plants was extended to include destruction on Federal land and other taking when it violates State law
 - Authorized FWS to monitor importation and exportation of protected plants
 - Appropriated funds for the Act’s implementation through the 1992 fiscal year
 - Established a “cooperative endangered species conservation fund” to provide matching funds to states for endangered species conservation projects
 - Increased the maximum penalties for violating the ESA, and designated that a portion of the fines levied are to go to conservation efforts
- ❖ 1992 – Authorization for spending under the ESA expired.
- Implementation of the Act is continued through annual appropriations for the Departments of Commerce and the Interior
- ❖ 1994 – Secretary of Interior Bruce Babbitt announced the “No Surprises” Policy
- ❖ 1995 – Listing of species as endangered under the ESA stopped

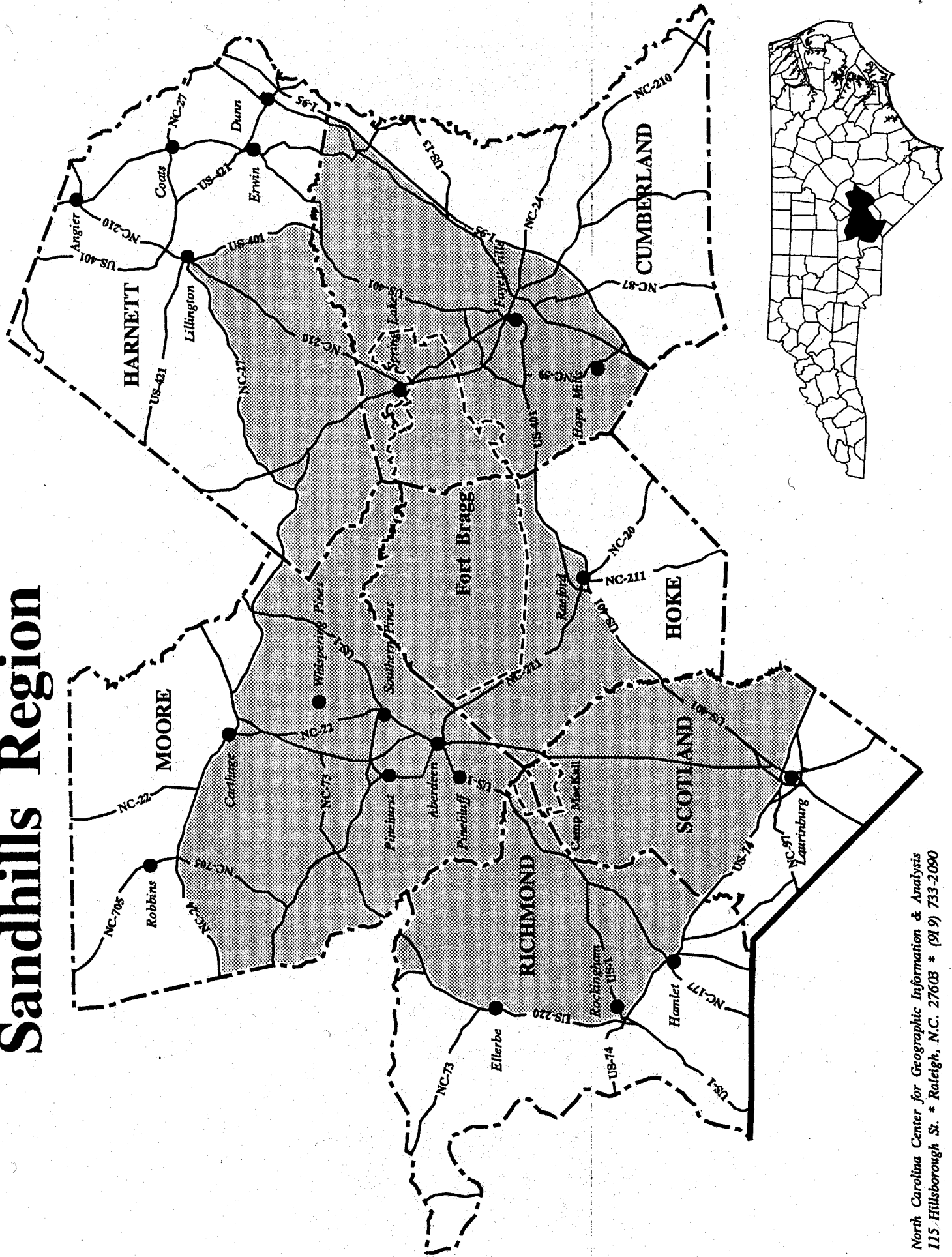
- February 23: House of Representatives voted to halt all listings under the ESA until the act is reauthorized during consideration of H.R. 450
 - March 1: Secretary of Interior Bruce Babbitt announced the “Safe Harbor” Policy
 - March 16: Senate supported an amendment to H.R. 889 prohibiting the listing of additional species and further designation of critical habitat under the ESA until the end of the 1995 fiscal year or until the act is reauthorized.
 - April 10: President Clinton signed H.R. 889 into law codifying moratorium on listing of endangered species
 - June 25: Babbitt v. Sweet Home Decided
 - August 9: Senate extends moratorium to September 1996 or until the Act is reauthorized, whichever comes first.
-
- ❖ 1996 – April 26: President Clinton waives moratorium on listing of endangered species.
 - ❖ 1998 – The “No Surprises” policy takes effect according to the Federal Register
 - ❖ 1999 – The “Safe Harbors” policy takes effect according to the Federal Register

Appendix 2

Carolina Sandhills Region SHA Map

(Taken from the “A Habitat Conservation Plan to Encourage the Voluntary Restoration and Enhancement of Habitat for the Red-Cockaded Woodpecker on Private and Certain Other Land in the Sandhills Region of North Carolina by Providing “Safe Harbor” to Participating Landowners”. Internet Document Available at:
www.environmentaldefense.org)

Sandhills Region



Appendix 3

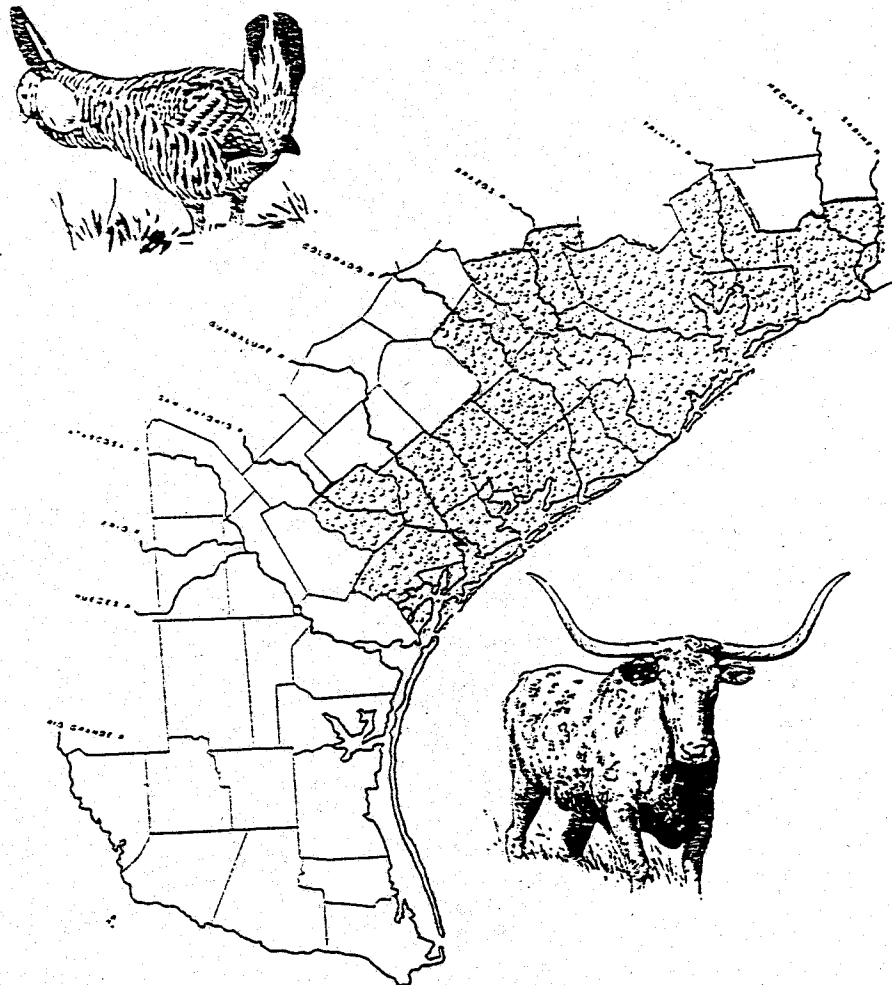
Gulf Coast Prairies SHA

(Taken from the “Habitat Conservation Plan for Conservation of Endangered Species on Private Land in the Gulf Coast Prairies of Texas: A ‘Safe Harbor’ for Private Landowners”. Internet Document Available at: www.environmentaldefense.org)

Habitat Conservation Plan

for Conservation of Endangered Species
on Private Land
in the Gulf Coast Prairies of Texas

A "SAFE HARBOR" FOR PRIVATE LANDOWNERS



May 1995

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**Habitat Conservation Plan
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A "SAFE HARBOR" FOR PRIVATE LANDOWNERS

I. Background

In fiscal year 1995, the Sam Houston Resource Conservation & Development Area, Incorporated [hereafter referred to as "RC&D"], entered into a Challenge Cost-Share Agreement (FWS Agreement No: 1448-00002-95-##) and a Grant Agreement (FWS Agreement No: 1448-00002-95-##) with the U.S. Fish and Wildlife Service [hereafter referred to as "Service"]. The purposes of the agreements are to provide a source of funding to RC&D for the Native Gulf Coast Prairie Restoration Project [hereafter referred to as "NGCPRP"]. The NGCPRP is a joint venture developed and administered by RC&D with oversight provided by the Service. The primary objective of the NGCPRP is to restore, conserve, enhance, and maintain the historic Gulf Coast Prairies of Texas and to ensure the continued existence of the coastal prairie ecosystem.

As part of the NGCPRP, participating private landowners [hereafter participating landowners referred to as "cooperators"] with technical assistance provided by local Soil and Water Conservation Districts, will develop and carry out Prairie Restoration Plans which outline all range management practices needed to improve the habitat. Only those range management practices outlined in the Natural Resources Conservation Service's document "Field Office Technical Guide" will be included in the plans. These range management practices are included in Appendix 1.

A significant component of the success of the NGCPRP is the development of a plan under §10(a)(1)(B) of the Endangered Species Act [hereafter referred to as "Act"] that encourages restoration, conservation and/or enhancement of prairie habitats that support either endangered or threatened species of fish or wildlife on private land in return for protection--a "safe harbor"--from any additional future liabilities under the Act. The RC&D will be the formal permittee under the requested §10(a)(1)(B) permit.

II. Purpose and Need

The purpose of this habitat conservation plan [hereafter referred to as "HCP"] is to encourage and facilitate the restoration, conservation, enhancement, and maintenance of the historic Gulf Coast Prairies of Texas for the endangered Attwater's prairie chicken *Tympanuchus cupido attwateri*, Houston toad *Bufo houstonensis*, and Texas prairie dawn-flower *Hymenoxys texana* on privately owned land. This plan will provide a "safe harbor" to cooperators from any additional future liabilities under the Act.

During the last 25 years, research indicates that grassland bird species have shown steeper, more consistent, and more geographically widespread declines than any other behavioral or ecological guild of North

American species, including neotropical migrants¹. The degradation and fragmentation of the coastal prairies has led to the decline of the Attwater's prairie chicken. An estimated 1 million Attwater's prairie chickens once occupied coastal prairie habitat from southwestern Louisiana to the Nueces River in Texas. The Attwater's prairie chicken was found to be reduced to about 8,700 birds in Texas in 1937, with none found in Louisiana². In 1995, the wild population of the Attwater's prairie chicken was estimated at 68 individuals (35 individuals in captivity) in four Texas counties. If current trends continue, the Attwater's prairie chicken could be extinct by the year 2000.

The Houston toad is also found within coastal prairie habitat. Similar to the Attwater's prairie chicken, the Houston toad is threatened by loss and degradation of habitat due to agricultural and urban expansion and also by watershed alteration. Much of the former Houston toad habitat has been cleared and converted to improved pasture, and its breeding habitat altered. Currently, the Houston toad is known to exist in only eight Texas counties.

The Texas prairie dawn-flower is known to occur in poorly drained depressions or saline swales around the periphery of low, natural pimple or mima mounds in open grasslands in two counties of the upper Gulf Coast Prairies of Texas. Habitat destruction associated with urban development, along with habitat degradation due to brush encroachment, has led to its decline.

Generally, there are no prohibitions under the Act preventing private landowners from taking listed plants on their own property. However, all incidental take permit applications ultimately require Section 7 consultation. Plants, therefore, are included in this HCP to ensure that issuance of an incidental take permit for wildlife species does not jeopardize the existence of a listed plant species.

Endangered species such as the Attwater's prairie chicken, Houston toad, and Texas prairie dawn-flower, are highly dependent upon prairie restoration, habitat conservation, and/or enhancement activities in the ecosystem. Protection and/or recovery of these species, therefore, is likely to be influenced by the land management decisions of the private landowners.

There are a variety of actions that private landowners could take to provide suitable habitat for the Attwater's prairie chicken, Houston toad, and Texas prairie dawn-flower [hereafter referred to collectively as "specie(s)"] on their land. Such actions could result either in the utilization by the specie(s) of currently unused land parcels or in the utilization by greater numbers on land parcels currently used by the specie(s). Not only do landowners have little legal or economic incentive to undertake such actions at present, they actually have in some respects a disincentive to do so. The use (or increased use) of a landowner's land by the specie(s) brings with it a responsibility to avoid harming the specie(s) and its habitat. These responsibilities, depending on which specie(s) is involved and the landowners tract size and land management or land use objectives, can sometimes limit or modify land use alternatives. To minimize these responsibilities under the Act, private landowners have generally refrained from taking the types of actions that would benefit the specie(s). Some landowners may in fact be taking actions designed to reduce the likelihood that their land will be used by listed fish or wildlife specie(s) in the future.

¹Knopf, F. L. 1994. Avian assemblages on altered grasslands. *Studies in Avian Biology* 15:247-257.

²U.S. Fish and Wildlife Service. 1992. Attwater's Prairie Chicken Recovery Plan. Albuquerque, NM. vii + 48pp.

Some landowners may be willing to take or permit actions that would benefit the specie(s) on their property if the possibility of future land use limitations can be reduced or eliminated. Such actions could include approved practices to control and/or eliminate brush encroachment through prescribed burning, mechanical/chemical manipulations of the land, reestablishment of native vegetation, and any other approved range practice as outlined in the Natural Resources Conservation Service's document "Field Office Technical Guide".

The primary objective of this HCP is to encourage specie(s) habitat restoration, conservation and/or enhancement activities by relieving a landowner who enters into a Prairie Restoration Agreement [hereafter referred to as "Agreement"], with RC&D, from any additional liability under the Act beyond that which exists at the time the Agreement is signed (these responsibilities, if any, are referred to as "baseline" responsibilities). In other words, the objective is to give cooperators safe harbor from added liability. As long as a cooperator carries out the agreed-upon habitat improvements and maintains the baseline habitat responsibilities, if any, on their property, they may make any other lawful use of the property, even if such use incidentally results in the take of the specie(s) or its habitat. There are only two qualifications on this right. First, the specie(s) may not be shot, captured, or otherwise directly "taken." Second, a cooperator who plans to carry out an action likely to result in the incidental taking of the specie(s) (i.e., an action that would not be permissible, except for this plan and Agreement) can do so only in the nonreproductive season unless otherwise authorized by the Service and must give the Service reasonable advance notice and an opportunity to translocate the specie(s) in question if the Service so chooses.

Interested landowners will be asked to sign an Agreement, with RC&D, that specifies any proposed habitat improvements, and records the general condition of the site (i.e., through maps, photos, and biological surveys). Agreements will be for a minimum of 10 years and subject to a potential repayment obligation to RC&D, of an amount equal to 100% of the amounts expended, if the Agreement is terminated due to a cooperator's breach of the Agreement. An Agreement is included in Appendix 2. No incidental taking of any existing specie(s) is contemplated or permitted under this HCP except in the special circumstances described below (see "Shifting Specie(s) Baseline Responsibilities to New Groups").

The specie(s) baseline for any cooperator will be determined by the Service and RC&D in accordance with the appropriate procedures in effect at the time the landowner enters into an Agreement under this plan. So long as a cooperator's future land use practices maintain the specie(s) baseline established at the time the Agreement was signed, any subsequent incidental taking of the specie(s) by the cooperator will be authorized by the §10(a)(1)(B) permit granted hereunder (a cooperator will only be subject to one set of guidelines during the life of the Agreement--those in effect at the time the Agreement is signed).

To illustrate, take the hypothetical example of an interested landowner who at the time of entering into an Agreement has no specie(s) utilizing their land. That cooperator has no existing responsibility to provide specie(s) habitat on the property and thus has a specie(s) baseline of zero. If, after carrying out the management practices agreed upon, a specie(s) is established on the property, the cooperator may, upon termination of the Agreement, carry out any legal land use that results in the incidental taking of the species thus established without violating the Act.

Landowners who enter into Agreements with RC&D, as well as their successors in interest, will be included within the scope of the permit by *Certificates of Inclusion*. A proposed *Certificate of Inclusion* is included in Appendix 3. In order to give assurance that habitat improvements made by the cooperator do not restrict present and subsequent owners, the proposed permit time period is 99 years.

III. Geographic Scope

The geographic scope of this HCP encompasses 19 counties within the Gulf Coast Prairies of Texas and includes only those areas that historically contained coastal prairie habitat as described by Gould, 1969³. A map of the geographic scope is included in Appendix 3. The counties included within this HCP are as follows: Aransas, Austin, Brazoria, Calhoun, Chambers, Colorado, Fort Bend, Galveston, Goliad, Harris, Jackson, Jefferson, Liberty, Matagorda, Orange, Refugio, Victoria, Waller, and Wharton. Priority will be placed on securing Agreements with landowners located adjacent to, or near, one of the remaining Attwater's prairie chicken populations. Specifically targeted are tracts within a 5-mile radius of Attwater's Prairie Chicken National Wildlife Refuge, sites in southern Galveston and Brazoria Counties located between the Nature Conservancy's Galveston Bay Coastal Prairie Preserve and Brazoria National Wildlife Refuge, and within a 5-mile radius of known prairie chicken populations in Refugio County.

IV. Impacts of the Proposed Taking

Although incidental taking of the specie(s) is to be authorized as part of this HCP, it is important to note that such taking may or may not ever occur. The expectation underlying this HCP is that management measures to be undertaken by the cooperator will result in the use of some, or most, of the land by the specie(s) and that without those measures such land will not otherwise be utilized by the specie(s). While cooperators will be permitted under this plan to carry out activities that could result in the incidental taking of the specie(s) on their land, they may choose not to do so at all or not to do so for many decades.

Because the Agreements contemplated for the program are of limited duration and are revocable by the cooperator, the program's benefits for the specie(s) may appear quite transitory. However, the favorable habitat conditions created through the program will not necessarily cease to exist upon expiration or termination of the individual Agreements. Those conditions may persist for many years thereafter, unless the affected cooperator elects to eliminate them. If the program continues for an extended period of time (e.g., for 99 years), with new land parcels constantly coming under agreement, as Agreements covering other land parcels expire, the net effect will be a shifting matrix of land being managed for specie(s) conservation, with a net beneficial impact upon the status quo.

Even if all the cooperators in the program eventually drop out, their obligation to maintain specie(s) baseline responsibilities will mean, at the very least, a return to the same circumstances that would have existed without the plan. Even in this worst-case scenario, the program will have provided significant interim benefits in the form of population and demographic maintenance during its duration. Such benefits would include temporarily halting or reversing the fragmentation of overall specie(s) habitat, creating or strengthening dispersal corridors between subpopulations, contributing some offspring that may either reoccupy previously abandoned areas or that may be used for relocation to land protected by longer-term

³Gould, F.W. 1969. Texas plants - A checklist and ecological summary. Texas Agricultural Experiment Station. MP-585/Revised.

conservation arrangements, and providing a form of "insurance" against the possibility of a disastrous event that could significantly reduce the number of specie(s) on other lands. In short, it will have provided a hiatus in the long-term decline of the specie(s) and thereby will have "bought time" for other conservation strategies to be tested or implemented.

V. Measures to Monitor, Minimize, and Mitigate Impacts

All interested landowners will sign Agreements with the RC&D. The Agreements will include a description of the property, the actions that the cooperators commits to take (or will allow to be taken) to improve prairie habitat on the property, and the time period within which those actions will be taken and maintained. The cooperators baseline responsibilities pertaining to specie(s) on or near the property will be determined by the Service and RC&D at the time the cooperator enters into an Agreement under this plan. The Agreement will grant to the Service and RC&D the right to enter onto the property for the purpose of ascertaining compliance with the Agreement and for censusing, marking or tagging, and, in certain circumstances, translocating the specie(s).

In return for the cooperator's commitments, the Agreement will extend to the cooperator the benefit and protection of a safe harbor through a *Certificate of Inclusion* under the §10(a)(1)(B) permit issued to RC&D. The *Certificate of Inclusion* extends to the cooperator the right under the §10(a)(1)(B) permit to incidentally take (i.e., take that is incidental to otherwise lawful activities or that is inadvertent) specie(s) on the described property, so long as the baseline responsibilities applicable to the property are maintained.

Subject to maintenance of baseline responsibilities, a cooperator may, after the period when the Agreement is no longer in effect (except during the specie(s) reproductive season, unless otherwise authorized by the Service), remove and/or convert specie(s) habitat to a non-beneficial use. If such land use is expected to result in the loss of specie(s) on the described land, the Service will be notified 60 days in advance of such removal/conversion and given the opportunity to capture and/or relocate any affected specie(s).

The above restriction against the removal and/or conversion of habitat during the reproductive season is intended to minimize the impact of the authorized incidental taking by eliminating the possibility that reproductive efforts will be disrupted and young of year destroyed. Additionally, the cooperators duty to notify the Service in advance of activities likely to result in the loss of the specie(s) and the Service's right to capture and/or relocate the affected specie(s) are also intended to mitigate the impact of the authorized incidental taking.

In assessing the impact of the authorized incidental taking, it is important to emphasize that the only prairie habitat that will be authorized to be eliminated is habitat that would almost certainly not be utilized by the specie(s) but for the participation of the cooperator in the "safe harbor" program described here. Unlike many other HCPs, where some loss of existing habitat is authorized in return for protection of other existing habitat, here no loss of existing specie(s) (i.e. currently occupied habitat) is to be permitted as part of this plan. The only habitat that may be lost in the future is habitat that is currently unused (or unused at the time an interested landowner enters into an Agreement) and that is not expected to be used, except for this plan (however, see "Shifting Baseline Responsibilities to New Groups"). Thus, the net impact of the incidental taking authorized under this plan is at the very least, a return to the status quo ante. The more

likely net impact is an improvement over the current situation in terms of the number of specie(s) and the total area of suitable habitat on private lands.

Monitoring of incidental take and implementation of the program will generally be accomplished in the following way. As noted above, the Agreements signed by the cooperators will grant to the Service and RC&D the right to enter onto the property for the purpose of ascertaining compliance with the Agreement.

VI. Funding

At present, there are Challenge Cost Share, grant and nonprofit organizational funds specially earmarked for the implementation of this HCP as part of the NGCPRP. Future funding may limit the size and scope of the plan; however, it will not preclude the implementation of this HCP. It is anticipated that at least some cooperators will be willing to assume the costs of carrying out the management measures to be required by the Agreements. In particular, this is likely to be the case when management measures are not expensive, such as spot treatment of invasive plant species with herbicide or grazing management activities. To ensure that interested landowners are, in fact, able and likely to bear such costs, RC&D will, at the time of entering into an Agreement, advise the landowner of the likely cost of the management activities to be required and inquire as to the landowner's ability to incur those costs.

In other situations, interested landowners may be willing to participate only if part or all of the management costs are paid for by the NGCPRP. This may be the case where the costs of the management measures are more substantial, such as the reestablishment of native vegetation. One of the objectives of this program is the conservation of endangered or threatened species of fish or wildlife. Cooperators receiving financial assistance as a part of this "safe harbor" program are typically required to maintain the agreed-upon actions for 10 years and are required to repay RC&D its costs in the event they fail to do so.

VII. Unforeseen Circumstances

This section addresses three hypothetical situations that, though unlikely, could occur. There could be:

- o a major loss of the specie(s) as a result of a catastrophic event
- o a redistribution of the specie(s) groups without any net increase in the numbers
- o a loss of the specie(s) groups upon which a cooperator's specie(s) baseline responsibilities were calculated.

A. Major Loss of the Specie(s)

The assumption underlying this HCP is that the plan will provide significant benefits to the specie(s) on

both public and private lands, even though on any given private parcels of land, those benefits may not be permanent or even long term. The expectation is that, even with this program, the bulk of the specie(s) population will remain on private land. It is conceivable, though unlikely, that as a result of a disastrous event such as a hurricane or a severe drought, the specie(s) could be so significantly reduced in numbers that the specie(s) found on public land would become far more important to the future of the population than they had been previously.

If a situation such as that described above were to arise, the terms of the permit and HCP would preclude the imposition upon cooperators of a duty to maintain habitat beyond their specie(s) baseline responsibilities. It would be the Service's responsibility, in such circumstances, to use other means of ensuring the conservation of the specie(s), which may include acquisition of conservation easements or fee title interests and the renegotiation of Agreements by RC&D so as to give additional protection to the specie(s) on the participating land. This is consistent with the Service's recently announced "No Surprises" policy with respect to HCPs. Moreover, it should be recognized that without the HCP, the consequences of the hypothesized disastrous event would be even more dire for the specie(s). Indeed, without the HCP, the pool of additional specie(s) this program is expected to create would not exist.

B. Redistribution of Existing Specie(s) Groups without Net Gain

Although the purpose and expectation of this program is to increase the number of specie(s) groups in the Gulf Coast Prairies of Texas, it is conceivable that it will simply redistribute existing specie(s) groups in a new configuration (e.g., with fewer specie(s) on relatively well-protected public land and more specie(s) on private land where they have no assurance of long-term protection, or a redistribution of baseline specie(s) groups on private land). This could occur if the habitat restoration undertaken as part of the program were to induce specie(s) in existing groups located in nearby degraded habitat to abandon the degraded habitat and relocate to the newly restored habitat.

While this possibility cannot be dismissed altogether, there are ways to reduce its likelihood. Prior to RC&D entering into an Agreement with an interested landowner, the Service can assess the likelihood that prairie restoration on that landowner's land will lead to abandonment of nearby existing specie(s) habitat on private or public land. If that risk would appear substantial, RC&D can refrain from entering into the Agreement (or enter into the Agreement only if it is long term or if the neighbor[s] also agree[s] to participate). Where the nearby existing specie(s) groups is on the landowner's own land, RC&D should ordinarily seek to include in the Agreement the landowner's commitment to habitat improvement measures that will ensure that the existing habitat is not abandoned. If, despite efforts to ensure that the effect of the program is a net increase in specie(s), the Service determines that the program is redistributing existing specie(s) without any net benefit to the population as a whole, RC&D can cease entering into any additional Agreements.

C. Loss of Specie(s) Baseline Groups

As noted above, the right of a cooperator to take specie(s) incidentally under this program is contingent upon their maintaining certain baseline responsibilities established at the time of entering into an Agreement. Those responsibilities will be clearly established by the Service and RC&D. For those few potential cooperators with existing baseline responsibilities, the Agreement will address not only enhancing and restoring habitat for other specie(s) but also sustaining existing specie(s). In spite of management and

protection efforts, there may be circumstances, through no fault of the cooperator, where one or more of the specie(s) groups that gave rise to the cooperator's specie(s) baseline responsibilities ceases to exist after the landowner enters into an Agreement. If the specie(s) group that gave rise to the baseline responsibilities ceased to exist through no fault of the cooperator, the Service would not require the landowner to maintain habitat for that specie(s) group. Thus, whenever the Service learns that a former specie(s) group, upon which part or all of a cooperator's specie(s) baseline responsibilities were premised, is no longer present, it shall advise RC&D who will notify the cooperator in writing of that fact and furnish them with a revised assessment of the specie(s) baseline responsibilities. The determination that any such specie(s) group is no longer present shall be the sole responsibility of the Service and shall be based upon sufficient investigation by the Service to ascertain that no specie(s) are occupying the site or are likely to do so in the near future.

Ordinarily, a cooperator's specie(s) baseline responsibilities will be associated with specific specie(s) groups in existence at the time they sign an Agreement. In certain limited circumstances, however, cooperators may, with the consent of the Service, shift their specie(s) baseline responsibilities to a new group that was formed on their property subsequent to the Agreement. This issue is discussed at greater length in Part IX.B. below.

VIII. Alternatives That Would Not Result in Take

The program described here authorizes the future incidental taking of specie(s) on land that is currently unoccupied by specie(s) and that is not expected to be occupied in the absence of this plan. No incidental taking of any existing groups of specie(s) is contemplated or permitted under this plan (except as described in "Shifting Specie(s) Baseline Responsibilities to New Groups"). It is anticipated that the maximum number of specie(s) groups that can be incidentally taken in the future will be no more than the number created through this program.

The only way to prevent any incidental taking, whether on currently used or unused land is to either continue the status quo (i.e., not create this program), or subject cooperators to the same legal responsibilities with respect to specie(s) using their land as a result of this program as they have with respect to the specie(s) generally. If there were a significant number of landowners willing to restore or enhance habitat for the specie(s) regardless of the legal consequences, one would expect to see such restoration and enhancement under way now, and there would be no need for this program. Clearly, however, that is not the case.

The purpose of this program is to reach exactly those landowners whose land management practices could benefit the specie(s) but who are unwilling to carry out those practices because of concerns about the legal consequences. In order to persuade such landowners to carry out those practices, they will need either a financial or regulatory incentive to do so. The alternative of paying landowners for desired management practices could be accomplished without allowing any incidental taking. The cost of such a program is likely to be commensurate with the cost of a program to acquire conservation easements. The Service is unable to fund such a program at the present time. Instead, the regulatory incentive proposed here, though it authorizes future incidental taking, is expected to attract sufficient interest among landowners to generate real benefits for the specie(s).

IX. Additional Measures

As discussed above, cooperators will be authorized to incidentally take specie(s) by eliminating habitat on their land, so long as such cooperators maintain the specie(s) baseline responsibilities determined at the time they entered into the Agreement. This section first addresses the issue of neighboring landowners and successors in interest describing how the proposed program will affect them. That is followed by a related discussion of the possibility for some cooperators to shift their specie(s) baseline responsibilities from one specie(s) group to another. The section concludes with a discussion of the treatment of the federal listed or candidate species of concern that may occur on participating land.

A. Neighboring Landowners and Successors in Interest

The clear purpose of the program is to encourage beneficial action by landowners who are willing to carry out actions that are not required of them by law and that are expected to result in the use of their land by specie(s) that would not otherwise use it. To achieve this purpose, it is necessary not only to relieve the landowner from certain land use limitations but also to extend this relief to their successors in interest as well. Otherwise, cooperators, in order to ensure that the land was unencumbered by specie(s)-based land use limitations in the event of their death or sale of the property to another owner, would have an incentive to eliminate the habitat they had restored or enhanced prior to transferring the land. In order to increase the likelihood that cooperators will continue to manage their land to benefit the specie(s), the *Certificate of Inclusion* will be extended to both the cooperator and to the successors in interest. Upon transfer of the property to another owner, the Service or RC&D will attempt to contact the new owner, explain the baseline specie(s) responsibilities applicable to the property, and seek to interest the new owner in entering into a new Agreement to benefit the specie(s) on the property.

The permit and *Certificate of Inclusion* extends to successors and assigns the same right to incidentally take specie(s) and associated habitat that the original landowner had upon termination of the Agreement. The sale or transfer of the property terminates the Agreement. The successors and assigns are in the same position the original owner would have been in had they retained the property and terminated the Agreement.

If, as a result of the activities to be encouraged by this program, specie(s) groups are established on participating land, the establishment of the specie(s) could impose limitations on neighboring landowners with regard to land use activities. Unless those neighboring landowners enjoy the same relief from future liability that the cooperator enjoys, some landowners may not be willing to carry out habitat improvements on their own land that would effectively burden their neighbors. Even where a landowner is willing to take action that could burden the neighbors, considerations of fairness would seem to dictate that neighboring landowners not be held to land use limitations while the cooperator is absolved of them. The Service, therefore, will with respect to any specie(s) group established on a cooperator's land subsequent to the time an Agreement with the cooperator takes effect, permit any action by the cooperator or other adjacent landowners that reduces species(s) habitat as long as baseline responsibilities are maintained. Only cooperators will be required to give the Service prior notice of any such actions and the opportunity to capture and relocate the affected specie(s). However, if one or more specie(s) groups establishes on an adjoining landowner, the Service will attempt to inform the adjoining landowner of that fact and will require that prior to taking any action that incidentally removes the specie(s) habitat, the Service be notified

and given an opportunity to salvage any affected specie(s). Further, such incidental taking of the affected specie(s) habitat may only be permitted during the nonreproductive season.

Because of the potentially large number of adjacent landowners, the Service will not extend *Certificates of Inclusion* to such landowners. However, the Service will, in promoting and describing this program, seek to make clear that, except in the very limited manner noted above, neighboring landowners will not be affected by a landowner's decision to participate in the program.

B. Shifting Specie(s) Baseline Responsibilities to New Groups

Ordinarily, landowner's specie(s) baseline responsibilities attach to specific specie(s) groups in existence at the time they enter into the Agreement. In certain limited circumstances, however, cooperators may with the consent of the Service, shift their specie(s) baseline responsibilities to a new group that was formed on their property subsequent to the Agreement. Specifically, when a new group is formed on a cooperator's land after they have entered into an Agreement and where the cooperator agrees to provide all the habitat needed for that group, that new group may replace any other group of similar status that was within the cooperator's original specie(s) baseline responsibility.

The above possibility can be illustrated with the following example. A cooperator has one specie(s) group on their property at the time they enter into an Agreement and they provide all the habitat needed for that group. The baseline specie(s) responsibilities, therefore, are to maintain that group and its associated habitat on the property. If, as a result of a cooperator's participation in the program, a specie(s) group is established on the property for which the cooperator provides all needed habitat, the cooperator may, with Service concurrence, switch the specie(s) baseline responsibilities from the first group to the new group. This flexibility may be to the cooperator's advantage if, for example, the cooperator wants to develop the portion of the property where the original group occurred. The reason for requiring the cooperator to maintain all the habitat needed for the new group is that, as described above, neighboring landowners are not required to maintain habitat for groups established pursuant to this program. Thus, without this requirement, the result might be that two groups would exist, neither of which would have sufficient habitat. The reason for requiring the Service's concurrence prior to a cooperator's shifting their specie(s) baseline requirements from one group to another is that there may be circumstances in which maintenance of the preexisting specie(s) group is necessary in order to maintain contiguity of habitat dispersal habitat or other desirable features of the landscape or population. When a cooperator receives the Service's concurrence to transfer their specie(s) baseline responsibilities, the Service will provide the cooperator with a written statement describing the revised baseline responsibilities.

C. Other Listed and Candidate Species

The HCP described here is aimed at encouraging habitat restoration and enhancement for the specie(s). The permit sought for this plan will authorize the incidental taking of specie(s) through future actions that eliminate or diminish the habitat restored or enhanced under this plan.

The possibility exists that non-targeted federal listed or candidate species (Table 1) associated with the Gulf Coast Prairies of Texas may occur on some of the land that might be considered for participation in this HCP. The elimination or diminution of the restored or enhanced habitat may affect the non-targeted listed or candidate species. For that reason, the Service and RC&D will, prior to RC&D entering into an

Agreement with respect to any land parcel, ascertain whether these non-targeted listed or candidate species are likely to be present on the parcel by consulting available records. If suitable habitat exists, the Service will inspect the property. Where such species are likely to be present, RC&D will include all Service recommendations in the Agreement, for that land parcel, as are necessary to ensure that no jeopardy, below the cooperator's baseline responsibilities, to the survival of any federally listed plant or animal species results from the activities authorized under the Agreement. The Service will complete a Service Section 7 consultation for each such Agreement with RC&D where such species occur that will tier into the biological opinion prepared for the overall program. RC&D will include any reasonable and prudent Service recommendation in the Agreement necessary to minimize the incidental taking of any non-targeted listed animal species that occur on the subject property. If any non-targeted listed and/or candidate plant species occur on the parcel, RC&D and the Service will encourage the cooperator to consider measures that will aid in the conservation of those species. If the cooperator agrees to implement the recommended measures for any candidate species, the cooperator will be protected from any further restrictions or obligations under the Act, if the species is federally listed as endangered or threatened in the future. This is supportive of the Service's "No Surprises" policy. RC&D and the Service believes it is likely that the program will result in net benefits to many of the non-targeted listed and candidate species associated with Gulf Coast Prairies of Texas.

Table 1. Non-targeted federally listed and candidate species associated with the Gulf Coast Prairies of Texas.

Group	Listing	Common Name	Scientific Name
MAMMALS	C1	gulf coast hog-nosed skunk	<i>Conepatus leuconotus texensis</i>
	C2	Aransas short-tailed shrew	<i>Blarina hylophaga plumbea</i>
	C2	plains spotted skunk	<i>Spilogale putorius interrupta</i>
BIRDS	C2	Bachman's sparrow	<i>Aimophila aestivalis</i>
	C2	Texas olive sparrow	<i>Arremonops rufivirgatus rufivirgatus</i>
	C2	Texas Botteri's sparrow	<i>Aimophila botterii plumbea</i>
	C2	Henslow's sparrow	<i>Ammodramus henslowii</i>
	C2	loggerhead shrike	<i>Lanius ludovicianus</i>
REPTILES	C1	Cagle's map turtle	<i>Graptemys caglei</i>
	C2	Texas horned lizard	<i>Phrynosoma cornutum</i>
	C2	alligator snapping turtle	<i>Macroclemys temmincki</i>
PLANTS	LE	black lace cactus	<i>Echinocereus reichenbachii</i> var. <i>albertii</i>
	C2	sandhill four-o'clock	<i>Mirabilis collina</i>
	C2	Mohlenbrock's umbrella sedge	<i>Cyperus grayoides</i>
	C2	Correll's false dragon-head	<i>Physostegia correllii</i>
	C2	golden-wave tickseed	<i>Coreopsis intermedia</i>
	C2	Texas (=Houston) meadow-rue	<i>Thalictrum texanum</i>
	C2	marshelder (=slender) dodder	<i>Cuscuta attenuata</i>
	C2	tissue sedge	<i>Carex hyalina</i>
	C2	scarlet catchfly	<i>Silene subciliata</i>
	C2	long-sepaled false dragon-head	<i>Physostegia longisepala</i>
	C2	Texas windmill-grass	<i>Chloris texensis</i>
	C2	Houston machaeranthera	<i>Machaeranthera aurea</i>
	C2	Welder spine aster	<i>Charadrius alexandrinus nivosus</i> syn = <i>Psilactis heterocarpa</i>

- LE - Listed endangered.
- C1 - Candidate category 1: Service has substantial information on biological vulnerability and threats to support proposing to list as endangered or threatened. Data are being gathered on habitat needs and/or critical habitat designations.
- C2 - Candidate category 2: Information indicates that proposing to list as endangered or threatened is possibly appropriate, but substantial data on biological vulnerability and threats are not currently known to support the immediate preparation of rules. Further biological research and field study will be necessary to ascertain the status and/or taxonomic validity of the taxa in Category 2.

PRAIRIE RESTORATION AGREEMENT

NATIVE GULF COAST PRAIRIE RESTORATION PROJECT

This Agreement is made the _____ day of _____, 199__. Between Sam Houston RC&D Inc., a not for profit corporation organized under the law of the District of Columbia with its address at 1410 S. Gordon, Business 35, Alvin, Texas 77511 (hereafter "RC&D") and _____ and _____ individual with its address at _____ (hereafter "Cooperator")

WHEREAS, as part of its purpose, the RC&D and the U.S. Fish and Wildlife Service (hereafter "Service") seeks to work with private landowners to restore, conserve, enhance, and maintain the historic Gulf Coast Prairies of Texas and to ensure the continued existence of the prairie ecosystem.

WHEREAS, this Agreement pursuant to the authority conferred by Permit No. _____, issued pursuant to §10(a)(1)(B) of the Endangered Species Act of 1973, 16 U.S.C. 1539(a)(1)(B), is entered into in order to improve prairie habitat for species such as the Attwater's prairie chicken, Houston toad, and/or Texas prairie dawn-flower (hereafter referred to collectively as "specie(s)").

WHEREAS, the Cooperator owns certain land, described in the "Prairie Restoration Plan", (included as Attachment A), and wishes to develop a portion of that land for the purposes listed above pursuant to the Native Gulf Coast Prairie Restoration Project.

NOW, THEREFORE, in consideration of the mutual premises listed herein the parties agree as follows:

1. The Cooperator warrants and guarantees that it is the owner of the site and has all required authority to enter into this Agreement and comply with its terms.
2. The Cooperator agrees to under take those prairie restoration practices as specified in the "Prairie Restoration Plan" within ____ months of the date of this Agreement.
3. The Cooperator agrees to maintain any specie(s) baseline responsibilities, as specified in the "Prairie Restoration Plan", established by the Service and RC&D at the time of entering into this Agreement.
4. The Cooperator agrees that any removal and/or conversion of specie(s) habitat to a legal non-beneficial use may be carried out only during the non-reproductive season (unless otherwise authorized by the Service) upon the termination or expiration of this Agreement, provided that all agreed upon conditions of this Agreement are fulfilled.
5. The Cooperator and/or its successors and assigns shall notify the Service, and provide the Service the opportunity to capture and/or relocate any affected specie(s), not less than sixty (60) days in advance of any removal and/or conversion of specie(s) habitat to a legal non-beneficial use.

6. The Cooperator is responsible for obtaining and shall obtain all necessary and required permits for the construction and maintenance of the improvements.
7. The Cooperator shall be solely responsible for the site and prairie restoration practices. Nothing in this Agreement shall give RC&D or the Service any jurisdiction of responsibility for the site and prairie restoration practices other than the right of inspection from time to time to assure compliance with this Agreement. The Cooperator shall be solely responsible for all liability arising from the site and practices. RC&D, the Service, and the partners of the Native Gulf Coast Prairie Restoration Project shall not be responsible for any liability arising from the site and practices.
8. During the term of this Agreement, the Cooperator shall permit RC&D, the Service, and/or their representatives the right of access to the site for the purpose of ascertaining compliance with this Agreement and for censusing, marking or tagging, and, in certain circumstances, translocating the specie(s).
9. Upon completion of the prairie restoration practices, the RC&D agrees to reimburse the Cooperator an amount equal to 50% of the actual approved cost. Only those costs, or the portion thereof for the prairie restoration practices listed in the "Prairie Restoration Plan" will be subject to reimbursement. Completion of the prairie restoration practices shall be deemed to have occurred when the construction of the practices have been completed and RC&D or their representative have inspected and accepted such practices as being in compliance with the "Prairie Restoration Plan".
10. The Cooperator shall be in breach of this Agreement if Cooperator:
 - A. does not maintain the improvements in compliance with the Prairie Restoration Plan;
 - B. sells or transfers the site and does not assign this Agreement to its successors and assigns;
or
 - C. breaches any other term of this Agreement.

If the Cooperator is in breach of this Agreement, RC&D may, upon thirty (30) days prior written notice to the Cooperator, terminate this Agreement unless the Cooperator within such notice period remedies the breach. If this Agreement is terminated due to a Cooperator's breach of the Agreement, the Cooperator agrees to reimburse RC&D an amount equal to 100 percent of the amounts expended.

11. In consideration of the foregoing, the Cooperator will be issued a "Certificate of Inclusion" under Permit No. _____. Such certificate authorizes the Cooperator and/or its successors and assigns, upon termination or expiration of this Agreement, to carry out any legal non-beneficial use on the site that will or may result in the incidental taking of the specie(s), above the baseline responsibilities, provided that the above agreed upon conditions of this Agreement are fulfilled.
12. Notices under this Agreement shall be in writing and shall be deemed to be given when mailed by certified mail return receipt requested or hand delivered to the address of the party to whom the notices is intended at the address listed above or at such other address as that party may

specify from time to time.

13. This Agreement shall be effective on the date listed above and shall remain in effect for ten (10) years from the date of the last signature on this Agreement.

Agreed and accepted:

COOPERATOR

(Signature) (Date) _____

SOCIAL SECURITY OR TAXPAYER I.D. NUMBER _____

SAM HOUSTON RC&D, INC.

BY: _____
(Signature) (Date) _____

TITLE: _____

CERTIFICATE OF INCLUSION

This certifies that the current and future owners of the following property [describe] are included within the scope of Permit No. _____ issued on [date] for a period of [99] years to the Sam Houston Resource Conservation & Development Area, Incorporated, (RC&D) under the authority of §10(a)(1)(B) of the Endangered Species Act of 1973 as amended, 16 U.S.C. 1539(A)(1)(B). Such permit authorizes certain activities by participating landowners (cooperators) as part of a habitat conservation plan to restore and enhance habitat for the endangered Attwater's prairie chicken, Houston toad, and Texas prairie dawn-flower. Pursuant to that permit and this certificate, the current and future owners of the above-described property are authorized to engage in any activity on such property that may result in the incidental taking of Attwater's prairie chickens, Houston toads, and Texas prairie dawn-flowers, subject only to the terms and conditions of such permit and the Prairie Restoration Agreement entered into pursuant thereto by RC&D and [name of cooperator] on [date].

[Name and Title of Representative]

Sam Houston Resource Conservation & Development Area, Incorporated

Date: _____

Senior Resident Agent
Law Enforcement
U.S. Fish and Wildlife Service

Appendix 4

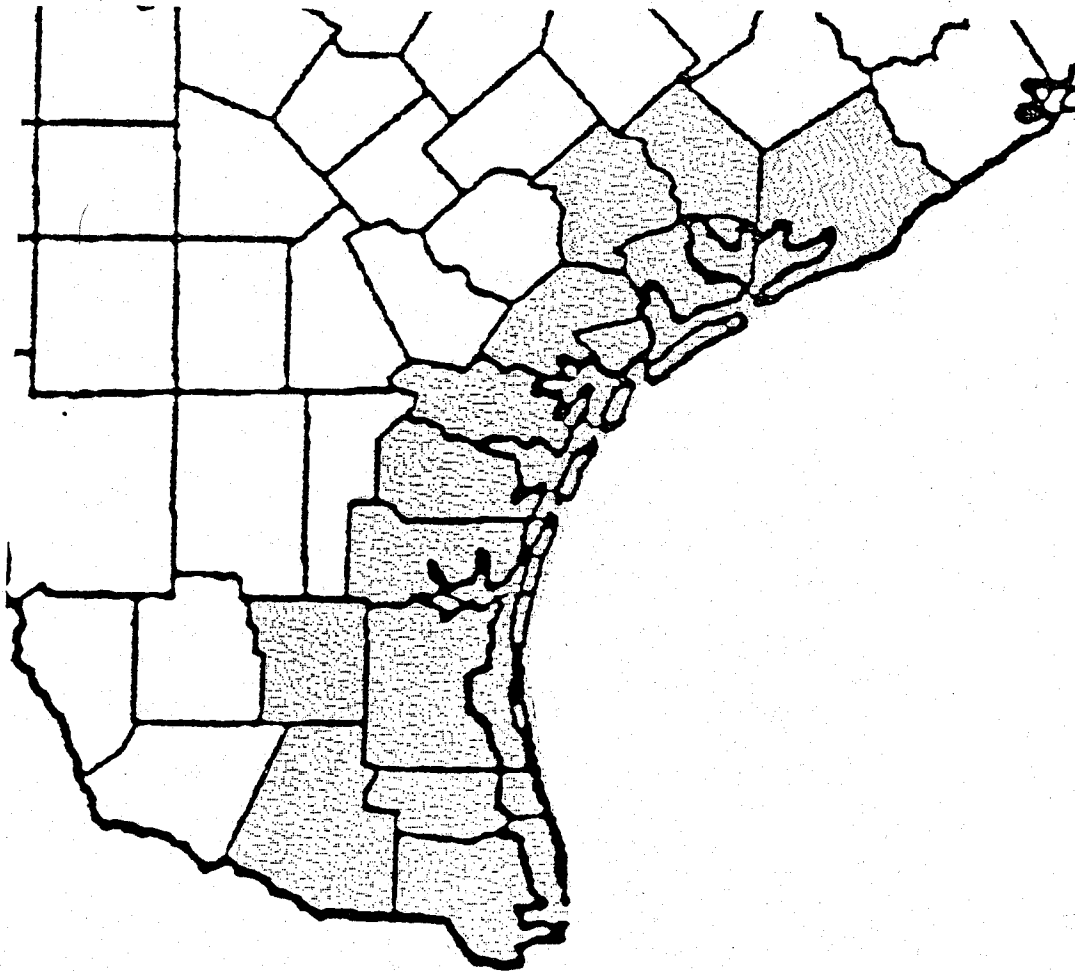
Aplomado Falcon SHA Map

(Taken from the “Habitat Conservation Plan for the Reintroduction of the Aplomado Falcon into South Texas: A ‘Safe Harbor’ for Private Landowners. Internet Document Available at: www.environmentaldefense.org)

HABITAT CONSERVATION PLAN

for the Reintroduction
of the Aplomado Falcon into South Texas

A "SAFE HARBOR" FOR PRIVATE LANDOWNERS



June 1996

Appendix 5

Aplomado Falcon Recovery Table

(Internet Document Available at: www.peregrinefund.org)

APLOMADO FALCON REINTRODUCTION SYNOPSIS

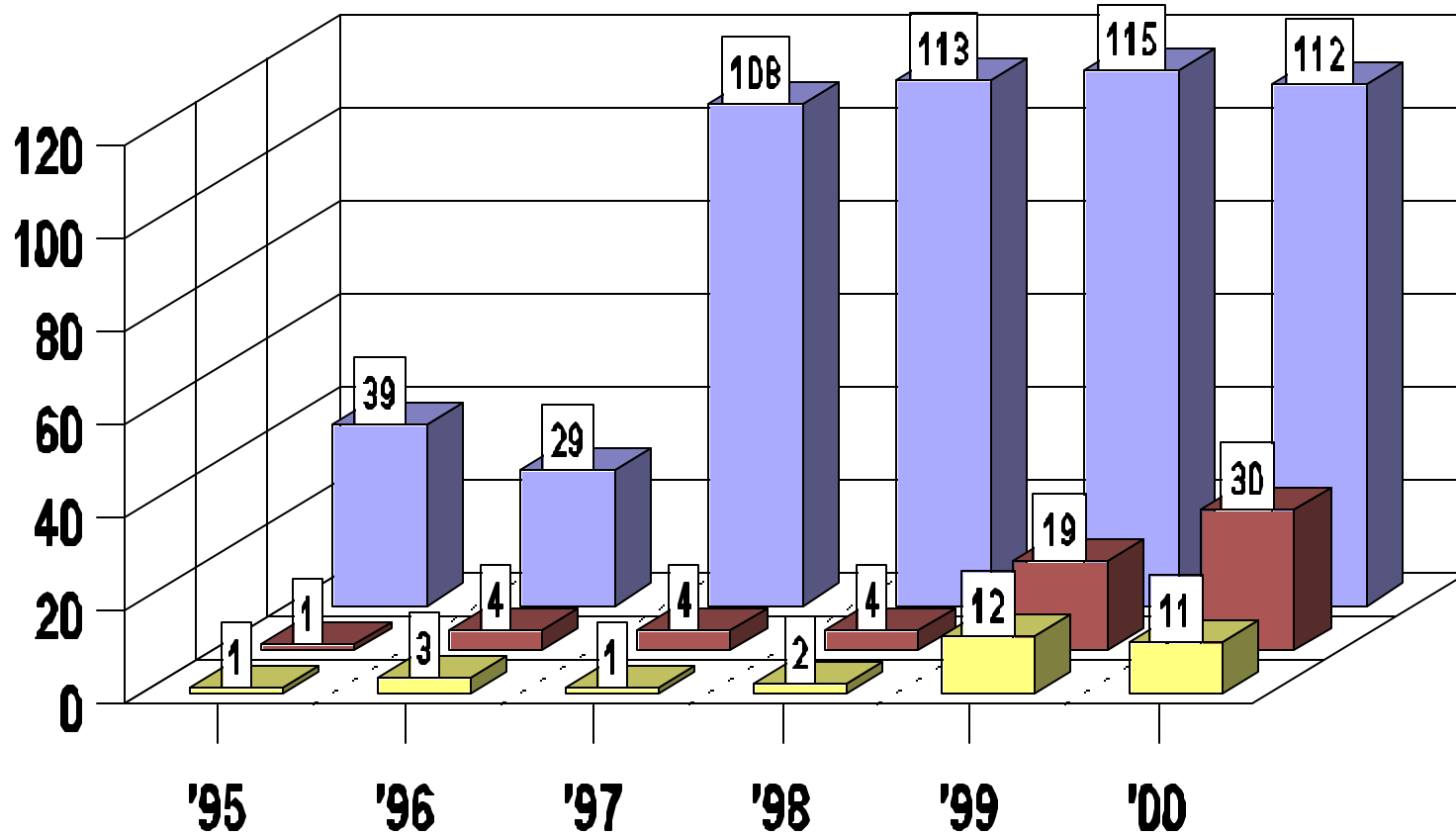
YEAR	INDIVIDUALS COLLECTED FROM WILD	CAPTIVE PAIRS	CAPTIVE YOUNG PRODUCED	YOUNG RETAINED	RELEASED	SURVIVAL	ESTABLISHED PAIRS	PRODUCTION FROM WILD PAIRS
1978-1990	25	17	37	13	24	16	0	0
1991	0	21	12	12	0	-	0	0
1992	0	30	19	19	0	-	0	0
1993	0	28	26	0	26	20	0	0
1994	0	28	12	0	12	7	0	0
1995	0	31	49	10	39	29	1	1
1996	0	33	41	12	29	24	4	3
1997	0	36	104	6	108	68	4	1
1998	0	36	117	4	113	77	>4	>2
1999	0	41	126	11	115	86	>19	>12
2000	0	42	115	3	112	73	>30	>11
2001	0	41	129	5	124	60	>33	>29
TOTAL	25	41	787	95	702	460	>33	>59

Appendix 6

Aplomado Falcon Recovery Graph

(Internet Document Available at: www.peregrinefund.org)

APLOMADO FALCON RECOVERY IN SOUTH TEXAS



-  **Falcons Released**
-  **Pairs Known**
-  **Young Fledged by Known Pairs**

Vita

John Gabriel Housein

Permanent Address

6308 Thomas Drive
Springfield, VA 22150
(703) 971-7690

Education

Virginia Polytechnic Institute and State University
May 2000 Bachelor of Science in Fisheries and Wildlife Science, Biology minor
May 2002 Master Urban and Regional Planning, (Concentration Environmental Planning)

Experience

- ***Defenders of Wildlife***: Washington DC - Summer 2001
Habitat Conservation Intern
Responsibilities: Information gathering including telephone and internet research. Conveying information to members of the habitat conservation division of Defenders of Wildlife. Creating spreadsheets. Creating content for Defenders of Wildlife web-pages. Monitoring federal activities concerning management of public lands and preparing and reviewing comment letters concerning those activities.
- ***Conservation Management Institute***: Blacksburg, VA - Summer 2000
GIS (Arcview) Digitizer
Responsibilities: Digitizing a map of the Maryland coast in order to eventually allow duck hunters to select the location of their duck blinds on-line.
- ***Guild Structure Research (VPI)***: Quantico Marine Corps Base, VA - Summer 1999
Research Assistant
Responsibilities: Helping set research transects within given habitat types. Identifying bird species and numbers of birds of each species by call along transects within each habitat type. Trapping and identifying small mammals along transects within each habitat type. Mapping transects using GPS.
- ***Small Mammal Habitat Analysis (VPI)***: Quantico Marine Corps Base, VA - Fall / Winter 1998
Research Assistant
Responsibilities: Trapping, identifying, aging, sexing, and weighing small mammals.

Skills

- **Computers Skills**: Experienced with internet and Windows applications on MAC and PC. Some examples include Excel, Word, Explorer, Netscape and Eudora. Experience with GIS applications (Arcview, Arcinfo).
- **Bilingual**: English / Spanish

Other

- ***International Exchange Program***: August 1999 / December 1999
Exchange student at Moi University, Kenya, in the faculty of Wildlife Management.
- ***Summer Study Abroad***: May 1999
Issues in World Forestry and Forest Products: A tropical Study Program in Nicaragua.
- ***Lambda Chi Alpha, Social Fraternity***: January 1997 / Present
Member of several committees coordinating events, house maintenance and served as colonial conclave representative in South Carolina. Elected to the office of fraternity educator, responsible for the education and progress of all recruits within the fraternity. Rewarded the Lambda Chi Alpha Graduate Fellowship for the 2001 – 2002 academic year.