Property Rights Case Law and the Challenge to the Endangered Species Act

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Abstract: Congress is poised to initiate what could be a lengthy debate over the U.S. Endangered Species Act. In anticipation, proponents of strong Fifth Amendment private property rights guarantees have begun an aggressive campaign pitting those rights against those granted other species in the Act. Little case law exists that considers both property rights and wildlife protection, but inference can be drawn from Supreme Court opinions regarding property rights which may provide insight into likely judicial contributions to resolving tension between property rights and endangered species. We review key legislative history, provisions of the Endangered Species Act, relevant case law, and the implications of recent judicial trends that pertain to property and imperiled species. We then make recommendations that may improve implementation of this critical piece of environmental legislation.

Introduction

With a minimum of discussion and the blessing of some of the great conservative politicians of that time, authorization of the U.S. Endangered Species Act (ESA) of 1973 sailed through Congress, hailed by proud legislators as the right action, and, if anything, long overdue. That times change is granted, but how could a bill once embraced by the staunchest right-wing Republicans come to be viewed, a mere 20 years later, as "the pit bull of environmental laws" (D. Barry quoted in Thornton, 1991: 605)? Today, even some of the most liberal members of the House and Senate cannot run far enough or fast enough to distance themselves from a public impression that they support the increasingly beleaguered legislation.

How did this happen? Did deceptive amendments create a monster from well-meaning measures to protect America's biological heritage? No, it wasn't a conspiracy, but a bona-fide attempt to deliver legislation that would address the problem of species loss in a meaningful way. Towards this end, congressional staff crafted the protections of the federal Act to be very broad. Twenty years is also just about how long it took Congress to realize the full implications of their actions. In-
provisions that plainly regulate land use. With reauthorization of the Act pending, the Nation's lawmakers face a major dilemma: How should they balance human property rights against the rights of other species? Given the results of the 1994 midterm elections, it is a conflict that the other species might lose, and while the reauthorization battle will primarily be waged with legal and procedural weapons, we think the debate warrants measured consideration by conservation biologists.

There Is A New Mood In America

"There is a new mood in America"; so begins the book that put the concept of resource and growth management on the map—The Use of Land: A Citizens' Policy Guide to Urban Growth. Published in 1973 The Use of Land was a coda for a constellation of social and political events that were launched with the first Earth Day in 1970 and that reached a crescendo with the passage of such historically important environmental legislation as the ESA, the Clean Air Act, and the Clean Water Act. The book called for moderation of the adverse impacts of affluence on land and resources within a package of policies that engaged both conservation and development (Meyer 1993:8).

One notably prescient chapter anticipated the debate over land and resources in the United States when it surveyed Fifth Amendment property takings history, particularly the appropriation of private property for public use and the requirement that just compensation be paid landowners when land is taken under such circumstances. Because of Fifth Amendment protection of property rights, the chapter concluded that the courts would have to support land use regulations "when the protection of natural, cultural, or aesthetic resources or the assurance of orderly development are involved." It posited that "a mere loss of land value will never be justification for invalidating the regulation of land use" (Meyer 1993:9).

There is always a new mood in this moodiest of democracies. Buffeted by an especially weak economy, environmental, political, and business leaders in the U.S. face an unprecedented struggle to balance economic growth with conservation of land and natural resources. Although regulation of the adverse impacts that accompany proposed development is now common, a property rights movement has emerged to challenge such regulation based on Fifth Amendment guarantees (Litvan 1994; Stapleton 1993). In 1993 alone, 31 state legislatures considered some form of legislation, including provision of compensation to landowners subject to regulatory takings or requirements that state agencies consider whether their actions will cause takings of property (Meyer 1993:11). Unfortunately, recent court decisions do little to offer a focused, explicit consideration of environmental priorities in the regulation of land use. Thus, even though 20 years have passed since the publication of The Use of Land and enactment of many key pieces of environmental legislation, America is still grappling with conflicts between economic and ecological priorities in land use. Few issues epitomize this problem as does the heated debate over the impact of the ESA on private property.

The pace of extinctions has accelerated at an unprecedented rate because of disruption of natural habitats that support imperiled organisms—habitats on the same land base that is viewed by many as essential for housing, roads, schools, and industry. It remains to be seen whether it is possible in this charged climate to find a balance between conservation and development. Obviously, sooner or later, development of relatively undisturbed land will stop—sooner if the resources essential to the survival of the United States are to be preserved, later when the supply of such land is simply exhausted.

Because of the direct attack on the ESA from private property interests and the recent spate of property takings opinions from the courts, it is important to examine the potential use of law to challenge ESA provisions on private land. After reviewing key legislative history, provisions of the Act, the implications of recent judicial trends pertaining to conflicts over imperiled species and relevant case law, we make recommendations for improving the structure and implementation of the Act.

Is the ESA a Land Use Law?

Although many protections of the ESA seem directed narrowly at the biology of individual species, its provisions are broad. With striking insight Congress mandated that the ESA serve to conserve the ecosystems upon which threatened and endangered species depend. Thus, Congress recognized that conferring protection on a species as threatened or endangered is not only a judgment about the status of its populations but also a recognition that something is very wrong with the habitats, the aquatic and land-based ecosystems that support them (Coggins 1994:4). Although Secretary of the Interior Bruce Babbitt contends that "the Endangered Species Act is not a land use law," he also acknowledges that "in many cases the only efficacious way to protect endangered species is to protect habitat" (Babbitt 1994). He understates. Species cannot remain viable in any meaningful way absent the lands and ecosystems that support them (Noss & Murphy 1995). It can be convincingly argued that although the ESA is not a land use law, it is definitely landscape-based and can dramatically affect land use options.

Historically, ESA implementation has been guided by the judicial system. Numerous cases illustrate how Con-
gressional intent has been translated into specific decisions and subsequent actions to protect species and habitat. Now, jurisprudence outside the strict confines of the ESA case law, in the area of eminent domain, may profoundly affect future implementation of the Act. Traditionally, eminent domain is the power of the government to condemn private property when an overriding public need for that land exists. The Fifth Amendment checks that power by requiring the government to compensate fairly a landowner for property so taken. Less clear is how eminent domain applies when the government does not actually condemn land outright or physically take the land, but regulates its use in such a way as to deprive the owner of some or all of its value—that is, in the form of regulatory takings. Not surprisingly, substantial disagreement exists over the extent to which the government can protect threatened and endangered species by placing conditions on the use of their habitats before such conditions constitute a regulatory taking.

**Seeds of the Present Conflict**

The seeds of the present conflict involving private property rights can be found in the earliest federal legislation protecting imperiled species. Gidari (1994) believes passage of the Endangered Species Preservation Act of 1966 marked the first time that explicit protection of habitat became part of a larger conservation strategy. Yaffee (1982) notes that this was the first federal law to deal "comprehensively" with the issue of endangered species... rather than providing help on a species-by-species basis. [the 1966 Act] incorporated three of the four themes of federal wildlife law: acquiring habitat, regulatory taking, and mandating interagency cooperation" (p. 39).

In support of the proposition that species and their habitats are inexorably linked, the 1966 Act authorized up to $5 million annually to acquire land to provide habitat for endangered species. One of the early ground rules for species conservation promoted the importance of protecting "habitat... threatened with destruction, drastic modification, or severe curtailment..." The scope of this early law, however, was limited to the taking of a species by killing, trapping, collecting, and harming, acts only forbidden on federal wildlife refuge lands. Under the 1966 Act, the Secretary of the Interior was also to advocate protection of endangered wildlife by other federal agencies, and the agencies were to "preserve the habitats of such threatened species on lands under their jurisdiction," although this mandate was significantly qualified by the wording "to the extent practicable" (Yaffee 1982:40; Kohm 1991:12-14). The subsequent Endangered Species Protection Act of 1969 was again primarily concerned with the overexploitation of individual species, but it earmarked more funds for habitat acquisition, including funding for the purchase of private in-holdings in areas already managed by the Department of the Interior (Kohm 1991:13-14).

These early laws set the context for later legal interpretations of the role of habitat in species conservation. However, it took the explicit ecosystem-based directives of the Endangered Species Act of 1973 to reach beyond the comparatively toothless prescriptions of the previous legislation. A key provision of the 1973 act stipulates that the listing of species is to be informed "solely by the best scientific and commercial data" without concern for either economics or private property rights, a directive that enhances the likelihood that real conservation can be achieved. Moreover, reasons for endangerment were expanded to include any phenomenon, natural or anthropogenic, leading to species declines. The law also covers any species of plant or animal and any distinct population of vertebrate animal, thus extending the protections of the Act to almost all biotic elements of an ecosystem.

Further linking species and their habitats in a regulatory framework, Congress called for "critical habitat" to be designated along with listing of species. Acknowledging the fundamental linkage between species and habitats, critical habitat is defined as "areas containing physical and biological factors essential to conservation of the species." Subsequently, Congress amended the Act to mandate that economic factors be considered when designating critical habitat; however, it did not require that species listings and critical habitat designations occur concurrently (Houck 1993:298; Kohm 1991:16). Maintaining a fire-wall between the two activities assumed that formal recognition of species status reflects biological rather than economic concerns (Kubasek et al.1994:329; Meltz 1994:373). The subordination of economics to biology in recognizing species at risk is now a focal point in the debates over the Act as it affects private property rights.

In section 7 of the original ESA Congress also prohibited federal agencies from taking or funding actions that would "jeopardize" any listed species or destroy or modify critical habitat. Under section 7 federal agencies must review "actions" or projects within their jurisdiction for potential impacts on threatened and endangered species (Yaffee 1982:57; Kohm 1991:17). This jurisdiction has included large public works projects and private activities that require issuance of regulations or granting of licenses, contracts, leases, permits, or easements by a federal agency. In this way, section 7 mandates have spill-over effects on private lands. For example, this occurred following the listing of the Northern Spotted Owl when the new timber management standards and guidelines in the Pacific Northwest were published which serve to limit timber production in public and private forests (Mueller 1994:32). Clashes over the application of section 7 prohibitions to federal development projects.
were among the first to arise in the short and volatile history of the Act and have opened the door for challenges to the ESA on private lands.

The potential for Act-inspired restraints on the use of private property began to emerge during early reauthorization efforts, when section 9 provisions against "take" of listed species were broadened and exemptions to it were limited (Yaffee 1982:57). Once a biological determination of species endangerment is made and a species is listed, section 9 prohibitions on take, possession, or sale of the species are triggered, be those acts on public or private lands. This prohibition applies to "any person subject to the jurisdiction of the United States." Section 9 broadly defines "take" to include acts that "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" (Kubasek et al. 1994:330). This prohibition hinges on an as yet unresolved legal question: If a take of a protected species is not allowed on private land, does that prohibition in effect constitute "taking" of property under the Fifth Amendment?

With legal resolution of that question still pending, Section 9 has set in motion events described as "economic trainwrecks" by Secretary Babbitt because its provisions have been interpreted to prohibit activities that modify habitat in ways sufficiently severe as to make likely the death or destruction of a species (U.S. Fish and Wildlife Service [USFWS] 1993a; Ruhl 1991). The practical effect of such provisions is to place limits on land use because property owners are prohibited from engaging in otherwise lawful activities that may result in harm to threatened or endangered species without explicit authorization. The listing of species and subsequent application of section 9 prohibitions often trigger public hearings, further scientific investigation, and, most significantly, indirect moratoria on economic activities. When applied in concert with state and local environmental regulation, section 9 can make long-range land use planning extraordinarily difficult—hence Babbitt's trainwrecks. Be they small landowners or large development interests, all lament the lack of certainty, and the delays and the unexpected costs associated with the process, especially where potential additional species listings loom on the horizon (Thornton 1991:607).

**Shifting the Focus from Species to Habitat**

Two court cases decided in the initial decade of the ESA are markers for the shift in focus from direct injury to imperiled species to impacts on the ecosystems that support those species. These cases, *Tennessee Valley Authority (TVA) v. Hill* and *Palila v. the Hawaii Department of Land and Natural Resources*, are the bedrock upon which most subsequent U.S. Fish and Wildlife Service implementation actions have been based. The first test of the original Congressional intent came only three years after the Act's authorization when the Supreme Court ruled to stop construction of the then more than 90% completed, multimillion-dollar Tellico Dam because it jeopardized the only known habitat of a tiny endangered fish, the snail darter. The Court found that the ESA reflected "a conscious decision by Congress to give endangered species priority over the 'primary missions' of federal agencies" and to prevent the destruction of such species "whatever the cost" (Kubasek et al. 1994). *TVA v. Hill* was also decided in part on the "premise that operation of the Tellico Dam [would] either eradicate the known population of snail darters or destroy their critical habitat" (Gidari 1994). The case unequivocally established the primacy of the mandate to protect species notwithstanding economic effects and recognized the inescapable connection between species and their sometimes very special habitats.

The 1979 case of *Palila v. the Hawaii Department of Land and Natural Resources* presented the first opportunity for the lower courts to explore the dimensions of the section 9 "take" prohibition and, until very recently, remained the leading precedent for interpreting "take" as it relates to habitat modification. The Ninth Circuit Court determined a section 9 take had occurred because the maintenance of feral goats and sheep as a game species in native forests by a state resources agency resulted in the destruction of the nesting sites of the endangered Palila, a bird endemic to Hawaii. Building on *TVA v. Hill* the court established that "protection of any endangered species anywhere [was] of the utmost importance to mankind and that the major cause of extinction [was] the destruction of natural habitat." It also noted that section 9 prohibits the modification of habitat, in addition to actions that directly kill listed species (Houck 1993:352; Melz 1994:379-380). *TVA v. Hill* dealt primarily with the obligation of the federal government under section 7 not to "jeopardize" the survival of threatened or endangered species, and *Palila* formally expanded the scope of the Act to nonfederal actions on private lands (Houck 1994:487). On the basis of *Palila*, the U.S. Fish and Wildlife Service expanded its definition of "harm" found in the broader section 9 definition of "take" to include "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns including, breeding, feeding, or sheltering" (USFWS 1981:54,748).

Subsequent cases emanating from different circuit courts reinforced this working concept. In *Palila v. Hawaii Department of Land and Natural Resources* in 1988 (*Palila II*) the revised definition of harm was once again applied when the state introduced a second non-native animal into the Palila's habitat and found that a "take" had occurred because habitat modification that prevents the recovery of a species also constitutes harm. It restated that proof of "harm" to a species did not require proof of death of an individual (Meltz 1994:380).
The case of *Sierra Club v. Lying* (1988) explicitly affirmed *Palila* in finding that timber management activities caused "harm" to the habitat of the endangered Red-cockaded Woodpecker and thus should be considered a section 9 "take" even without a designation of "critical habitat." It also validated the findings in *Palila II* by concluding that proof of "harm" does not require proof of death. Two other cases also uphold the "harm" regulation articulated after *Palila*. *Defenders of Wildlife v. Environmental Protection Agency (EPA)* (1989) found that the EPA caused "harm" by registering strychnine for above-ground use because consumption of the compound by endangered species caused their death. *Sierra Club v. Yeutter* (1991) affirmed *Lying* once again, establishing that the U.S. Forest Service caused "harm" when it permitted clear cutting near Red-cockaded Woodpecker cavity trees (Thornton 1991:611-612).

The original Palila ruling was once again affirmed by the Supreme Court in the recent case *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon* (1995). The case considered the impact of the Northern Spotted Owl listing and designation of its critical habitat on private lands in the Pacific Northwest. In a decision contradicting prior cases the Washington D.C. Circuit Court of Appeals had invalidated the regulatory definition of "harm." It concluded that habitat modification on private property does not constitute harm, noting that equating habitat modification and harm is "neither clearly authorized by Congress" nor a "reasonable interpretation of the statute." The Supreme Court reversed that decision arguing that the Secretary of the Interior "reasonably construed Congress' intent when he defined 'harm' to include habitat modification."

**Is the ESA Flexible?**

Despite firm prohibitions found in the language of the ESA, the law has been designed and adapted to "flex" to accommodate diverse interests and changed circumstances. In 1978, facing a public furor after *TVA v. Hill*, Congress was prompted to review section 7 provisions, which resulted in several important amendments. Because the Act was criticized for failing to account appropriately for the vast expenditures of federal resources on the Tellico dam, agencies are now permitted to weigh the economic costs and benefits of their proposed actions, instead of making decisions based strictly on biological determinations of species endangerment. A committee was established to evaluate the applications of federal agencies for exemptions from section 7. This "God Squad" committee can exempt a project if it is determined that no "reasonable" or "prudent" alternatives exist to the project as proposed. More importantly, the 1978 amendments institutionalized the consultation process, requiring that a written biological opinion evaluate the potential effects of a project before there is an "irreversible and irretrievable commitment" of resources to it (Kohm 1993:17; Mueller 1994:39). These amendments were designed to allow the Act to respond at moments of critical impasse.

These compromises, however, did not effectively address the issue of endangered species protection on private property. Hence, in 1982 Congress moved once again to revise the Act, this time to offer private landowners a remedy of the sort that was available under section 7 on the public lands. Congress revised the Act to permit exemptions to section 9 for "incidental" take of protected species if a landowner submitted a Habitat Conservation Plan (HCP) under section 10(a) of the ESA (Meltz 1994:375-376). "Incidental" is understood to mean that property owners can "take" individuals of a listed species while carrying out otherwise lawful activities if the majority of the species are protected by appropriate mitigation measures (Thornton 1991:605,622-623; Meltz 1994:375-376). The degree of flexibility provided by section 10(a) provisions is a matter of disagreement among legal scholars. Houck (1993:358) believes that the HCP process is "taking place in a largely ad hoc... fashion," with the result being "a gradual attrition of habitat to a baseline of [species] survival." He also posits that "a project of any size will go forward. The only question is price." Thornton (1991:607) portrays the HCP process as "severely troubled." His criticism focuses on a development community frustrated by the length of time necessary to prepare HCPs and "the inability of the HCP to remove legal risks associated with the subsequent listing of species not addressed in the [original] HCP." Because the Act was designed to protect individual species, developers are justifiably concerned that potential future listings put their land use plans at risk even if they participate in an HCP.

In response to the newest set of challenges to the Act the current administration is attempting to integrate more flexibility into the law before the upcoming reauthorization battle. It has done so by creative interpretation of existing provisions of the Act and with administrative policy changes. Under section 4(d) provisions of the ESA, the so-called "special rules," the federal government is attempting to customize solutions to endangered species conflicts without resorting to the "hammer" of command and control regulation, which relies upon listing, taking prohibitions, and regulatory enforcement. Comparable to section 10(a), special rules have been used to integrate more flexibility into section 9 by allowing for "incidental" take. Under special rules particular threatened animals may be excepted from the usual provisions of the Act because the species have special management needs or can serve as experimental populations. The intent of the rule is to give the federal government more flexibility to gain the cooperation of landowners and other government agencies (Kohm 1991:19; Meltz 1994:375).
A section 4(d) rule was recently promulgated to support Natural Community Conservation Planning (NCCP) in southern California, following the listing of the California gnatcatcher as a threatened species. Although the U.S. Fish and Wildlife Service used a traditional single species listing to protect the bird, the special rule supports the state of California's separate efforts to promote a regional, multiple species, multiple habitat protection program while also providing for orderly development. It does this by allowing "incidental take" of the species within a 5% cap on habitat conversion while ongoing scientific studies identify particularly species-rich or sensitive habitats (Reid & Murphy 1995). With such an approach, the resource and wildlife agencies hope to identify and protect areas of important habitat and their resident species before those habitats become so degraded or threatened by development that they trigger additional listings (USFWS 1993b; California Department of Fish and Game 1993).

A 1994 policy statement issued by the Departments of Interior and Commerce, the agencies responsible for ESA implementation, presents administrative solutions to private lands conflicts. These administrative solutions take four forms. First, in response to the criticism that the best available science has not always been applied, the Departments intend to "incorporate independent peer review in listing and recovery activities" to enhance the public review process (U.S. Department of Interior et al. 1994:34,270). This would be accomplished by soliciting outside expert opinions during the public comment period. Second, the agencies want "to identify to the maximum extent practicable those activities that would or would not constitute a violation of section 9 of the Endangered Species Act of 1973" (U.S. Department of Interior et al. 1994:34,272). This is a response to the criticism leveled against section 9 that there is no certainty regarding the type of development activities that might trigger a take of species. Third, the agencies hope "to minimize the social and economic impacts of implementing recovery plan development" and "involve the representatives of affected groups and provide stakeholders the opportunity to participate in recovery plan development" (U.S. Department of Interior et al. 1994:34,273). Under these guidelines recovery plans would give measurably more weight to social and economic factors and to the concerns of landowners. Fourth, it appears that the administration hopes to do all this and "to collect, evaluate, and complete all reviews of biological, ecological and other relevant information within the schedules established by the Act, appropriate regulations, and applicable policies" (U.S. Department of Interior et al. 1994:34,271). These are heady goals considering that a lower court in Fund for Animals v. Lujan (1992) directed the Service to expeditiously list more than 400 species that had languished for years in a "warranted" but "precluded" limbo and that as of 1993 nearly two-fifths of outstanding species listing proposals were already beyond the one year deadline for final listing. The warranted but precluded category is the Bermuda triangle of listing because certain candidate species seemingly vanish from listing consideration, ostensibly in order to give priority to species facing greater threats of extinction (Houck 1993:285–286). Many environmentalists fear that adding further procedural hurdles would force the government to miss more deadlines or reduce the number of species it proposes for listing (Endangered Species Coalition 1993).

Another recent administrative response, designed to smooth the path toward reauthorization of the Act is the so-called "no surprises" guarantee offered to landowners by the Department of Interior. No surprises promises to any group agreeing to protect threatened or endangered species through a Habitat Conservation Plan a guarantee that no additional property will be taken or costs incurred during the life of the plan, usually 20–30 years. This guarantee is an attempt to allay landowner fears that the government will make new demands if a species continues its downward trend. Attractive as the promise sounds, no surprises is hardly a new offering; HCPs have explicitly offered landowners this guarantee since the first such plan on San Bruno Mountain. The guarantee, however, has alarmed environmental groups because the policy appears to increase risks to species.

In March 1995, the Departments of Interior and Commerce released a list of 10 principles designed by the administration to change ESA implementation. Crafted to respond to a wide array of the criticisms of the Act and its implementing agencies, the list offers major concessions on all aspects of regulatory implementation including increased roles for state governments, minimization of social and economic impacts, more peer review of listing decisions, commitments to improve recovery rates with the explicit goal of delisting species, and exemptions from the prohibitions of the Act for most activities on single home, residential tracts and for other activities that affect fewer than 5 acres (Office of the Secretary 1995). Despite reservations and concerns on both sides, these efforts do illustrate the current administration's good faith effort to make the Act work in a more discretionary and flexible fashion to accommodate private development while still protecting endangered species.

Takings Theory

You have the right to use and enjoy your private property, free of interference, so long as you use it in a way so as to not offend or endanger or create a nuisance for your neighbor or his property (Tauzin 1993:8468).

So Representative Billy Tauzin from Louisiana colloquially describes the complex nature of the debate over pri-
vate property inherent in modern constitutional takings theory and provides a clue as to why this tradition may clash with prohibitions in the ESA. Those, like Tauzin, who advocate protection of property rights follow the Lockean view which holds that individual natural rights, including property rights, are "not derived from the sovereign (government) but are the common gift of mankind" (Epstein 1985:10). According to this tradition, each individual is endowed with certain "natural" or individual rights. The role of the state is simply that of a referee using its police power to assure the orderly conduct of those individual liberties and to protect property. For example, use of the police power of the state would be limited to neighbor-to-neighbor nuisances or other public harms, such as impacts on public health or safety. Natural law does not allow for protection of species, wetlands regulation, or control of strip-mining because landownership extends beyond the land itself to the freedom to do with that land as one pleases (Epstein 1985:3–5,121; Kens 1993:85,107).

Another argument pertinent to the property rights debate is that government suffers from "fiscal illusion." Simply stated, this means government bureaucracies pursue regulation because it does not cost them anything to do so. If, however, the Fifth Amendment forces the government to pay compensation for property takings, agencies are then forced to recognize and weigh the impact of regulation on property owners (Thompson 1990). Although these view are not necessarily shared by the majority on the Supreme Court, recent cases indicate that the Court may, in the future, become as concerned with protecting property rights as it is with protecting such basic liberties as free speech.

Regulating activities on private lands presents more than a philosophical dilemma. Although much of the current controversy surrounding implementation of the ESA hinges on the extent of the State's power to regulate enterprise on private land, a complementary issue concerns compensation for property takings as mandated by the Fifth Amendment. In theory, if a government action prevents a harm, such as species imperilment, the government does not have to compensate. If it is viewed that society benefits from an action, such as obtaining land for a park, the landowner must be compensated. However, the harm-benefit distinction only works if it has a baseline. A baseline is understood to be a naturally accepted state of affairs—that is, everybody agrees on what is a harm or a benefit. Obviously, it is difficult to find a universally acceptable baseline. For example, until very recently, actions such as cutting timber or building houses were not considered harmful to public interest (Rolston 1991). Nonetheless, the diminishment of biotic diversity has been linked to exactly those types of activities where they modify species habitat. In practice, the courts have defined the baseline depending upon the conclusion they want to reach in a specific case. This continues to be true in the state courts. However, at the federal level the Supreme Court declared the harm-benefit distinction to be a dead letter in the case Lucas v. South Carolina Coastal Council (1992). The Court found that the harm-benefit distinction is in "the eye of the beholder" and, as an individual determination, thus, is antithetical to the idea of a baseline. Sax (1993a:1436,1442) believes by jettisoning the harm-benefit argument the Court has accepted the conventional view of land as "a passive entity waiting to be transformed by its landowner." He believes the Court has rejected the notion that land can and should have value outside its best economic use. Therefore, if society desires habitat protection, it must compensate the property holder. Notwithstanding this recent determination by the Court, making a distinction between harm and benefit still resonates with the public.

Property Rights and the ESA

A nearly blank slate of case law exists between property rights protection and the ESA. Historically, the only takings case that dealt directly with private property and wildlife was Bailey v. Holland (1942). In this case, hunting was banned on private land near a wildlife refuge predicated on protections afforded species by the Migratory Bird Treaty Act. The Court made this finding despite the landowner's contention that application of the law rendered his land "practically worthless." The Court found the prohibition was a fair exercise of the police power of the state, rather than its power of eminent domain. In more than 20 years of Act implementation no Act-related private property takings cases have been adjudicated by either the Court of Federal Claims or the Supreme Court, although litigation is ongoing (Meltz 1994). Moreover, no landowner has ever sought compensation for damages as a result of ESA prohibitions (Babbitt 1994:361). Proponents of property rights contend that no one has challenged the Act because of the costs of litigation and the rigid judicial standards for takings cases (Burling 1992:346). Advocates of species protection believe that the Act is sufficiently flexible to resolve such conflicts early in the conservation planning process and that many ostensibly strong cases overstate the degree of conflict with property rights (Meltz 1994:385,387). However, new cases challenging wetlands regulations as unconstitutional property takings bear watching for precedents that may apply to future actions under the Act, at least because almost half of all endangered species are associated with wetlands (General Accounting Office 1993; Burling 1992:314,318; Shaeen 1994:468–469; Meyer 1994:15). Such cases are being argued based on diminished value that is "caused" by regulatory control.
A Brief History of Takings Law

"Contradictory" is the best word to describe the raft of cases in the history of regulatory takings jurisprudence. One of the earliest takings cases, *Mugler v. Kansas* (1887) found that the commercial operations of a distillery in a residential area caused public harm by reason of the nuisance exemption (Shaeen 1994:458–459). The nuisance exception allows for governmental regulation to prohibit acts injurious to the health, morals, or safety of the community. The nuisance exemption is the basis for much modern environmental regulation. Justice Oliver Wendell Holmes later muddied the waters of taking for much modern environmental regulation. Justice Oliver Wendell Holmes later muddied the waters of taking claims in *Pennsylvania Coal Company v. Mahon* (1922) in which the state sought to prevent coal companies from mining if that action would cause surface structures to collapse—seemingly a fairly clear public safety threat. The Court ruled against the state, finding for the first time that a taking had occurred because of regulation by the state. Holmes actually created the concept of regulatory taking in this case, declaring that “a regulation that goes too far will constitute a taking” (Kens 1993:113; Burling 1992). Unfortunately, he provided not a clue as to what “too far” actually meant, leaving courts since to grapple with the concept. The Court further clouded the property takings issue in the case *United States v. Carolene Products Co.* (1938) by establishing a dual standard of scrutiny for laws regarding personal liberties, such as free speech and religion, and laws involving economics. The message of *Carolene* was that the court would not uphold government regulations that impinge on “fundamental” personal liberties, but would be more likely to uphold government regulations affecting economic rights, such as property rights. In this way, the case relegated the Fifth Amendment property takings clause to the fringes of constitutional concern (Burling 1992:324; Epstein 1985:214).

Modern Manifestations of Takings Law

Three Supreme Court cases decided in 1987 add to the contradictions and confusions. The cases are *Keystone Bituminous Coal Association v. DeBenedicts*, *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles*, and *Nollan v. California Coastal Commission*. Although not directly applicable to the ESA, the rulings illustrate the standards that scholars believe may effectuate regulatory takings and have future application for the Act. These cases are among the definitive modern planks in the deck of regulatory takings law as defined thus far by the Court. *Keystone Bituminous Coal Association v. DeBenedicts* is important as a contemporary example of the argument advanced in *Mugler* regarding state regulation of nuisances if a harm is prevented. *Keystone* is viewed as a companion case to *Pennsylvania Coal* because the state had again attempted to exercise its police power to protect surface structures from collapsing as a result of underground mining tunnels. Coal companies argued that because state regulation prevented mining, it constituted a taking. The Court reversed its stand on the issue by challenging *Pennsylvania Coal* on two points. The majority found that the land use regulation did not “deprive the owner of economically viable use of his land” and that it did “substantially advance legitimate state interests.” Exactly because *Keystone* was similar to *Pennsylvania Coal* the Court thus appeared to dispute the original standard used to define when a regulation went “too far.” If the courts accept prevention of harm to a species as a so-called nuisance exemption, then *Keystone* may be a precedent for cases involving the ESA. The case may also set precedent because the state’s regulation was deemed valid despite its economic impact on the property owner. Finally, the Supreme Court directed the lower courts to examine agency definitions and implementation regulations, rather than simply review the stated goals of the regulation when judging if a legitimate state interest was substantively advanced. This seems to indicate a concern for establishing an appropriate relationship between the goal of regulation and its demands on property owners (Wise 1992:410–411).

The second case, *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles*, was decided only three months after *Keystone*. The Court found a compensable regulatory taking had occurred when a county ordinance prevented the church from rebuilding recreational facilities on a floodplain (Burling 1992:329). The case assumes, for purposes of answering the compensation question that the ordinance was unconstitutional but does not actually decide that point. Hence, the Court was able to define a situation in which regulation had gone “too far,” that is where compensation might be warranted. The Court also appeared to set the stage for a less deferential judicial approach to reviewing zoning and land use regulation (Wise 1992:405). The case seemed to signal that the courts might begin to participate in a more direct way in regulatory decisions affecting property rights, an important consideration given the current composition of the high court, which has a majority who seem quite concerned with property rights protections.

The Court found that the church was entitled to compensation by applying the doctrine of temporary takings—temporary taking occurs when a government action temporarily deprives an owner of his or her property—thereby establishing that government is liable to compensate for temporary as well as permanent regulatory takings (Minan 1993). The finding of this case rejects previous case law. In *Agins v. Tiburon* (1979) the plaintiffs had likewise disputed a local zoning ordinance that limited development on a plot of land, in this case...
an ordinance regulating coastal development. The California Supreme Court did not find for compensation. It ruled that simply invalidating a statute was sufficient remedy for unconstitutional regulations (Sax 1993b:40). The point of view manifested in First English could have a chilling effect on the enactment of regulations where a potential compensable constitutional challenge might be posed, such as endangered species protection, because of the substantial new costs associated with such regulations (Wise 1994:403–404).

A recent state court decision provides an interesting sidebar to the issue of temporary takings adjudicated in First English. In the case of Florida Game and Fresh Water Fish Commission v. Flotilla, Inc. (1994), the state court found that no taking had occurred when habitat for nesting bald eagles was protected for several years in a portion of a subdivision. No temporary taking was found by the court because the owner was prevented from only the very most ideal economic use of the land, the protected land was only a small portion of the total acreage, and the restrictions protected a "vital public interest," all issues germane to whether implementation of Act prohibitions can be challenged as property takings (Meltz 1994:389–390).

Last, First English is intriguing because it was accepted by the Court despite the failure of the church to "exhaust" administrative remedies before seeking redress (Burling 1992:331). The decision in First English has established more substantive protections in terms of constitutional tests that plaintiffs must meet before a finding of a compensable taking can be made. Historically, the exhaustion doctrine requires that the plaintiff challenge an agency's decision administratively and then wait until the agency's decision is final before bringing suit. A requirement closely related to the exhaustion doctrine is the so-called "ripeness" standard. The idea underlying the standard is that in a dispute not yet ripe—one in which the issues are not sufficiently developed to affect the landowner concretely—the federal court lacks jurisdiction (Meltz 1994:386). "Exhaustion" and "ripeness" are two of the more important and exacting tests used by the judiciary when deciding to hear takings cases and are viewed by many as key reasons that property takings claims have not previously been pressed in the context of the ESA. The mere listing of a species, for example, would not seem an adequate basis to support a takings claim because it is merely the first step in a lengthy regulatory process that offers many opportunities for administrative appeal. There is no real precedent explaining how much exhaustion is required for an ESA-induced property takings claim. A more limited definition of ripeness might allow for a temporary takings claim; as a rule, the federal courts have found only government delays that are "extraordinary" should prompt action under the Fifth Amendment (Meltz 1994:390).

In the third case, Nollan v. California Coastal Commission, the California Coastal Commission had conditioned the grant of a building permit for expansion of an existing residence along the coast on the deeding of a public access easement across the property to the state. The Commission claimed a larger house would limit visual and "psychological" access to the beach by the public from the road. Significantly, the supposed limit on access was perpendicular to the road, and the required easement was parallel to the beach (Wise 1992:411). Because mitigation requirements such as conservation easements are a large part of the endangered species permitting process, Nollan is viewed as one of the more important, recent cases in its potential impact on ESA implementation.

In deciding against the state the Supreme Court established a new test for regulation. It demanded that the condition or mitigation have an "essential nexus" to the impacts caused by the development. In simple terms, there must be a close fit between the supposed harms from development and the conditions imposed by the government (Burling 1992). The court established that the means–ends link was more important than the overall goal of environmental protection (Coyle 1992:856). Nollan imposed a higher burden of proof, a "heightened scrutiny," on the state to show that the law substantially advanced a "legitimate state interest," another key standard used to assess the constitutionality of regulation (Bley 1993:54–57). The case created a new conundrum because the Court failed to define exactly when an essential nexus was absent. The spare good news for the proponents of a strongly enforced ESA is that the Court explicitly reaffirmed that "a broad range of governmental purposes and regulations" would be considered "legitimate state purposes" when ascertaining whether a regulatory taking had occurred (Wise 1992:411–412). Protection of species might well be held in this embrace.

Although there is a solid foundation of common law in some states that requires property owners to contribute to the goals of environmental protection, the need to establish a proper nexus may still confound ESA implementation (Frank 1993:46–48). The scientific databases necessary to establish a nexus between land development and impacts on imperiled species are rarely available for private property; a matter of significant concern, whether the burden of proof be on the government or the landowner. Should the burden be viewed by the courts as falling on the implementing agency, the U.S. Fish and Wildlife Service will be challenged to justify their enforcement actions. Conversely, should the burden be seen as falling on the permittee, private landowners will be faced with the nearly impossible task of documenting empirically that their development will not jeopardize the continued existence of a protected species.
The Latest Volleys

How the much discussed Lucas v. South Carolina Coastal Council decision of 1992 will bear on property takings law and the ESA is still a matter of considerable uncertainty. The state of South Carolina enacted a conservation measure that prohibited building on certain parts of its coastline. The owner of two parcels of unimproved beach claimed the “takings” were unjust and demanded compensation. The Supreme Court agreed. To prevent potential expropriations by the state the Court refined the definition of compensable regulatory takings into two distinct categories: economic use and physical invasion. An economic use occurs when all economic value or productive use of land is eliminated by regulation. A physical invasion occurs when regulations “compel the property owner to suffer a physical ‘invasion’ of his property” (Shaheen 1994:461; Minan 1993). There is little agreement among legal scholars as to how these refined definitions of what constitutes regulatory take will be applied in future cases. However, both physical invasion and economic use may have some relevance to the Act, although economic use in a property takings argument is the more likely scenario.

Like many historical property takings rulings before it, the implications of the Lucas case are not easy to interpret. Perhaps most confusing is the suggestion by the Court that the “background principles” found in a state’s law of property and nuisance should be used to determine the constitutionality of regulation. The Court ruled that a landowner need not be compensated if the conduct in question violates established “background principles” of what constitutes harm. In essence, Lucas held that state regulation on behalf of the public interest is no wider than the interests of the people who live next door (Halper 1994:5). It is readily apparent that most complex land use and environmental regulations cannot be clarified using neighborhood solutions. In the past, however, the nuisance exemption was employed flexibly, especially when applied to new types of regulation. In Lucas, the high court appears to be defining nuisances far more narrowly (Sax 1993b:41).

Commentators disagree on whether the protections of the ESA will qualify as nuisance exemptions. Shaheen (1994) compares the preservation goals expressed in the statute at issue in Lucas to endangered species protection, drawing the conclusion that because it seems unlikely that one neighbor would sue another for taking an endangered species, Lucas should have little bearing. Frank (1993) contends that in states such as California, which traditionally have a high degree of control over the use and development of private property, including preservation of fish and wildlife, the protection of habitat on private lands would probably be considered to be prevention of a harm under the state’s nuisance law. Sax (1993a) also presumes that states will exercise significant latitude in making the determination of whether their existing statutes limit property rights. However, he also believes that the case sent a clear message that “states may not regulate land use solely by requiring landowners to maintain their property in its natural state as part of a functioning ecosystem, even though those natural functions may be important to the ecosystem” (Sax 1993a:1438). Moreover, Sax feels that the Court is attempting to limit the legal foundation for treating land as part of an ecosystem, rather than as purely private property. Rolston (1991) believes that under the bulk of state property law, landowners, users of public land, fishermen, hunters, and others never had an unregulated right to own or use wildlife. Because the right to “take” or “harm” wildlife is not a traditional part of a property owner’s title, to do so could be considered a nuisance. Melz (1994) argues that because the Act is not specifically aimed at regulation of land, Lucas is not even relevant case law.

Although the Supreme Court did provide a standard for cases of total economic loss in Lucas, it was not clear on the issue of partial takings. The typical partial taking case involves a situation where a landowner is prevented from developing just part of his or her property due to regulation. The law frequently mandates limits on development to protect a listed species, but those limits often result in only a partial diminution of the value of the land or simply prohibit the most ideal economic use of it. This is the common solution for those exercising their opportunity to incidentally take species under section 10(a) of the ESA. One earlier case provides some clues as to how this issue might be addressed. In Penn Central Transportation Co. v. New York City (1978), the Court rejected the argument that a historic preservation ordinance that prevented the company from constructing a modern office building above the vintage Grand Central Station was a taking because other uses of the property were still available to the company. The Court examined the impact of regulation on the “parcel as a whole” in order to measure the extent to which the property right had been taken. In past property takings cases, the courts generally did not separate a single part or parcel of land from the whole to determine loss of value. Using the standard in Penn Central, the Court found that taking one stick from the full bundle of property rights was not enough to constitute a taking because other rights in the bundle remained (Shaheen 1994:467; Burling 1992:348).

The question remains at what point does a landowner actually suffer a complete loss of property value? And, does takings law require an analysis of “what’s lost” or “what’s left?” If, for example, 90% of land is to be maintained for habitat, is that a taking of that portion of the land, or should the focus of the analysis be on the economic value of the remaining 10% (Minan 1993:52)? The answer to those questions is important for species pro-
tection. Under the ESA the government has been able to regulate the use of land to protect species without having to pay compensation every time it affects the value of the land. Whatever final percentage is identified to be that point at which loss of economic value occurs, that point may not integrate well with the need to regulate some percentage of land to promote species survival.

A number of wetlands cases from the U.S. Court of Claims add to the overall confusion surrounding partial takings. In two 1990 cases, Loveladies Harbor, Inc. v. United States and Florida Rock Industries, Inc. v. United States, the court awarded compensation for partial takings after fill permits were denied under the Clean Water Act, although the Supreme Court has agreed to hear Florida Rock. In other cases the Court of Claims limited its examination of the effect of the regulation to the part of the property negatively affected by denial of the fill permit, instead of looking at the overall impact of the regulation on the value of the whole tract of land (Shaheen 1994:468; Burling 1992:349). The same court then failed to award compensation in two other wetlands cases, Tabb Lakes v. United States (1993) and Dufau v. United States (1990), because some economic benefit could still be derived from other portions of the properties involved (Shaheen 1994:469). In these latter cases, the Court considered the entire piece of property, including the parts unaffected by the regulation, and reached the conclusion that the landowners had only suffered a diminution in the value of part of the land, not a complete economic loss.

Another issue of concern to the Court in Lucas was the “investment-backed” expectations of the landowner. This issue may also have some relevance to the ESA. Investment-backed expectations are understood to be the “reasonable expectations” of a landowner to profit from his land. Many of the conflicts over the Act arise because landowners purchased property before a species listing and may have had expectations about their ability to develop or sell that property (Brown 1994:45A; Hulse 1993:C-4). New landowners are less likely to be able to make this claim because the Act provides a period of public notice and comment when a listing is the offing, during designation of critical habitat, and when recovery planning occurs (Shaheen 1994:471).

Dolan v. the City of Tigard (1994) is the most recent case in the pantheon of takings jurisprudence, and it serves to clarify some open issues from previous taking cases. The Court rejected a demand by the city that a property owner donate 10% of her land for floodplain drainage and for a pedestrian/bicycle path as a condition for enlarging her small business. It found in this case that to avoid financial liability for a “taking” the city could not merely declare that the path would likely save a lot of automobile trips; it had to prove that the path would cut congestion and by a quantifiable amount (Shaheen 1994:466). The case serves as one post-Lucas ex-

ample of a physical regulatory taking that went “too far” because the city had demanded the actual transfer of real estate for open space. Dolan is also consequential because the Court sought to resolve a question left open in Nollan concerning “the required degree of connection between the exactions imposed” by government “and the projected impacts of the proposed development.” Like Nollan, it is a case with potential relevance to endangered species programs because it concerns the kind of “nonpossessory land use restrictions,” such as conservation easements and mitigation requirements, that are typically elements of habitat conservation plans under section 10(a) of the ESA.

Prior to the Dolan decision each state used different tests of varying stringency to assess the degree of connection between condition and required impacts (Kamenar 1994:7). It appears the Court has created a single federal standard called the “rough proportionality” test to be used when reviewing such connections. This standard does not apply in cases adjudicated by state courts. The rough proportionality test requires government to “make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development” (Greenhouse 1994:A-10). As discussed in Nollan, applying such a test to endangered species protection is difficult because there is always a tension between the risk of species-extinction and scientific uncertainty. Regulations under the ESA attempt to avoid the risk of permanent species loss but are often characterized by a good deal of biological uncertainty regarding the nature of protection necessary to assure species survival (Albrecht & Isaacs 1994:4; Bley 1994:4; Soulé 1991). In Dolan the Court appears to have shifted the burden of proof for establishing that connection from the landowner to the government when the latter requires mitigations or conditions for development.

Finally, Dolan raised Fifth Amendment protection of property rights to a higher place in the constitutional firmament by dismissing the two-tiered treatment of rights delineated in the Carolene decision which gave preference to basic freedoms over economic rights. It found that “there is no reason why the Takings Clause of the Fifth Amendment . . . should be relegated to the status of a poor relation” relative to these other Constitutional protections (Greenhouse 1994:A-10). This finding may augur a more substantive concern for economics and property rights by the Court at cost to species and habitats.

The day after issuing Dolan the Supreme Court remanded and reversed another takings case, sending it back to the California Court of Appeals for re-examination in view of Dolan. At issue in Ehrlich v. City of Culver City is whether the city can condition the granting of permits to build homes in one location on payment of fees for the construction of recreational facilities in another location. Ehrlich considerably expanded the
reach of Dolan by limiting the ability of government to place monetary conditions on development (Berger 1994:6; Kamenar 1994:14). Monetary conditions, also known as "development impact fees," currently subsidize a large chunk of government financing of public facilities, including acquisition of open space to serve as habitat. An adverse finding in Ehrlich could have a negative impact on habitat conservation plans where impact fees on developers are a major source of funding (Bealey 1994).

It is unclear how various court rulings concerning private property will be applied in endangered species conflicts. Meltz (1994) asserts that Fifth Amendment property takings challenges to the Act will fail because of the historically high legislative value placed on species, the formidable standards required for takings challenges, and the limited impact on land value of the majority of Endangered Species Act section 9 restrictions. Shateen (1994) believes that because species protection does not meet the traditional understanding of nuisance law the "investment-backed" expectations of property owners may be affected if a species is listed after their purchase of land. Given the incremental development of case law in this area, it seems more likely that the authority of the Act will be changed legislatively and by regulatory action rather than judicially.

Recommendations for the "Taking"

With fully 50% of the almost 800 federally protected species found exclusively on private land, it seems plausible that conflicts between species and landowners will multiply (Fisher & Hudson 1993:v). Notwithstanding the many legitimate concerns voiced over the impact of certain property uses on species and their habitats, protection of property rights still prompts a powerful reaction. If species preservation is ever to be reconciled with private property rights outside the courtroom, the time has come for compromise rather than controversy and action instead of reaction.

No one on either side suggests that the federal ESA is realizing Congressional intent or that it has been implemented rationally or responsibly. Everyone complains about the single species focus of the law which neither adequately protects biotic diversity nor offers landowners certainty that they will not face additional species listings down the road. No one really believes it makes sense biologically or economically to conserve species using a balkanized project-by-project approach. Everyone recognizes that certain provisions of the Act serve as disincentives to real conservation of species. And no one believes that funding has been adequate to recover listed species or to acquire private lands for necessary habitat.

Is it time to call for a major overhaul of the ESA? Should we ransack the provisions of a statute that offers protection to species that deign to reside in places other than the nation's public lands? No. We believe the Act already offers abundant opportunities to land and resource managers to respond to conflicts where landowner goals contrast with good species and habitat management. We are heartened by recent attempts by the Department of Interior to explore novel approaches to Act implementation on private property with the Nation's first Natural Community Conservation Plan (Reid & Murphy 1995). We believe that the latitude to engineer creative responses to conflict resides in the pre-scient language of the Act as originally formulated, and we strongly recommend that government formally incorporate the following considerations into current regulations and programs.

Use the Public Lands

Public lands should form the core of habitats to be managed for threatened and endangered species and are a logical starting point for habitat protection programs. Many landowners currently feel they are being forced to make the first sacrifice of property for the greater public purpose. The Supreme Court has already ruled in the Dolan decision that it will not allow the full weight of that sacrifice to fall disproportionately on the individual landowner. Unfortunately, few options exist to alleviate the sting of that sacrifice given the bleak budgetary picture at all levels of government, and now institutionalized voter opposition to the funding of large-scale acquisition programs of private land for species conservation. Systematic, integrated management of public lands for the preservation of biotic diversity may be the best means available to shift a substantial portion of the conservation burden without further strains on the public purse. The federal government administers nearly 30% of the land area of the United States. States including Pennsylvania, Minnesota, Utah, and Washington also oversee extensive, widely distributed areas of open space (Shaffer 1992). Commitment of the public lands for conservation purposes also makes sense because such lands often constitute the only large blocks of undeveloped habitat remaining in some regions. This remaining open space may be critical to the success of current conservation planning efforts being carried out over broad areas involving multiple species and multiple habitats. However, strict reliance on the public lands to support biotic diversity is simply not realistic given that many imperiled species are not found on these lands. Private lands will continue to play a significant role in conserving our natural heritage.

Support the Implementation of the National Biological Service

Timely implementation of the purpose of the National Biological Service (NBS) could generate the superior bio-
logical information that best serves the purposes of the Act and could provide the "certainty" so desired by landowners. Most importantly, the NBS database can enable planners to link the empirical information necessary for conservation planning to land use regulation, thereby creating the "essential nexus" so desired by the Court in Nollan and Dolan. Critics of the NBS claim that data will be integrated "into the management actions and decisions of government agencies who are going to regulate private property in America." Perhaps, but because some regulation will inevitably occur, better data will inform and temper the implementation of our environmental laws and regulations to avoid the economic trainwrecks that come with inadequate or tardy information (Tausin 1994:8474).

Because the NBS mission is confined to matters biological, it will only serve as an information tool for decision makers when there is a need to establish priorities for allocation of scarce resources. Optimally, because the mission of the NBS is nonpartisan, conclusions about resource management based on good data may be less subject to challenge by stakeholders. Because the NBS is nationally funded, it also distributes the cost of species protection more equitably to all segments of society rather than forcing individual property owners to bear most of the direct financial burden for that protection. Moreover, by replacing the current piecemeal data collection efforts of states, localities, and individuals, the NBS will also be less expensive. The NBS must prepare for such a role by not only moving apace within its authority to inventory and monitor the country's biotic diversity, but by establishing the capacity to develop task forces to address regional, political hot spots and conflicts.

Emphasize Ecosystem Management in Habitat Conservation Plans

Planning designed to promote multiple species conservation in the context of ecosystem management can dovetail with the development of superior biological information to meet conservation goals most effectively and give property owners a greater measure of future security. Habitat Conservation Plans under section 10(a) of the ESA are not serving either species or landowners well. With their focus on single species protection, such plans are inadequate to slow the disappearance of species and their constituent populations. HCPs are also expensive to develop and place the financial burden for development and implementation of the plans primarily on project sponsors. The Supreme Court has demonstrated its hostility to environmental regulation that places the onus for compliance on the individual or the few, as is exemplified in cases from First English to the present.

There are other good reasons for refocusing the provisions of the Act to emphasize ecosystem management. An ecosystem-based model for conservation planning allows us to identify and protect key habitat areas and their resident species before those species are imperiled by development. This approach reduces the risk of additional species listings and satisfies the need to protect the broader natural communities and ecosystems that support species at risk. Because such planning by necessity has a more regional focus, it tends to spread the costs more equitably among landowners. Ecosystem-based planning could offer the added benefit of renewing public support for the Act because such an approach responds to the preference of many for protecting the balance of nature and healthy ecosystems, rather than single species (Coursey 1994).

Give Property Owners Incentives to Preserve Species

Building economic incentives into the ESA will promote habitat conservation and encourage endangered species protection, especially among smaller landowners. At issue in many takings cases, most prominently in Lucas, is the ability of landowners to make some economic use of their land. It is now harder to determine how much regulation that causes a loss of economic value will be tolerated before compensation would be mandated by the Court. Unfortunately, the point at which regulation triggers a compensable property taking may be lower than that required for actual species conservation. Under the ESA, section 9 prohibitions against habitat modification can be real disincentives to private land conservation. To leave land in an undisturbed state often means a loss of property value. Additionally, a number of government programs serve as disincentives to conservation and actually promote the further degradation or loss of habitat for endangered species. Examples include subsidized timber sales and below-cost grazing fees on public lands that may be better suited for other uses such as conservation areas for species and habitats. We need to institutionalize the incentive programs for conservation currently being proposed to counter disincentives to protection.

Such incentives include providing tax credits to landowners for habitat maintenance or improvement. These are not new concepts. Reductions in property taxes are a widely accepted means of facilitating the conservation of open space, agricultural, and historic lands. Landowners with small holdings could earn tax credits through compliance with the Act by using appropriate construction methods or by participating in biological surveys. Other incentive strategies would be to reduce corporate and personal income taxes, or capital gains and estate taxes, when a landowner maintains essential habitat for imperiled species. Government thus may be able to avoid constitutional property takings challenges because
it can make the case that regulations do not limit a pecuniary return on property.

Create a Market for Species and Habitat Preservation

The development of a free market for habitat conservation is another response to the challenge of creating a tangible economic return for landowners who invest in preservation. A major problem with establishing the value of species and their habitats has always been the difficulty of setting a price for goods that are neither bought nor sold in the market. A variety of solutions have been proposed to develop a market, among these is the habitat transaction method, under which any landowner who conserves or restores land would receive credits based on the value of that land as habitat (Olson et al. 1993). If for example several listed species and candidates were found on land that supports high quality habitat, it would have higher value than land supporting single listed species or a habitat in degraded condition. Landowners that propose projects that adversely affect habitat must pay based on the regional decrease in overall conservation value associated with their plans when carried out. Credits could be traded to develop elsewhere in the planning area, or credits could be sold to other developers who need them to compensate for project impacts. While this recommendation is challenging and far-reaching, because it requires that a market be created where the trading of these conservation credits would occur, it does have a good deal of potential to resolve many pressing problems with the current system of command and control regulation. The method can effectively translate the intangible social value of biological resources into economic terms; hence, under a system of tradeable credits, it maybe possible to avoid takings challenges because land continues to have economic value.

Revise General Plans and Planning Priorities of Local Governments

Areas within city and county boundaries that have high potential conservation values should be identified. Conservation planning for these areas should be integrated into the general plans of the localities, creating a bulwark of species conservation as a "legitimate state interest" at all levels of government. Although species protection is largely a federal mandate, the locus of control over implementation resides in local government. Unfortunately for the purposes of the ESA local governments are revenue driven when establishing planning priorities. Top priority is given to Wal-Marts and housing developments, large sources of taxes, and low priority is given to set-asides of lands for habitat and open space, sources of no revenue. Combine this bias in planning with successful property takings challenges that limit the government planning flat, such as in Dolan (and possibly in Ehrlich), and conservation planning will likely founder without a clearly articulated local agenda to protect species and habitats. One successful program, developed in California to respond to the special problems of local government, is the Land Conservation Act of 1965. Originally conceived as a preferential assessment program that reduced property taxes on farmland in return for agreements to restrict development for 10 years, later amendments allocated state funds to counties participating in the program to replace portions of property tax revenues lost on contracted lands and to pay for local administration. This Act is popular because it provides incentives for voluntary stewardship of private land and for local government to participate in the program (Office of Research 1991). As a model for conserving imperiled species such a program would target funds for lands where the conservation payoff would be highest.

Increase and Reprioritize Funding

Increases in and reprioritization of funding in the Department of Interior's budget is needed to promote ecosystem-level biotic diversity protection. A broad spectrum of opinion has identified funding problems that forestall effective Act implementation. For example, researchers at Harvard studied the system that has been used for assigning to animals priority in listing and spending at the U.S. Fish and Wildlife Service. They found that species that generate economic conflicts tend to elicit extra political attention and in turn generate spending irrespective of biological or associated priorities (Metrick & Weitzman 1994). The National Wilderness Institute (1993:1,19), an organization that opposes the ESA, contends that the true cost of endangered species recovery plans is misrepresented because the plans do not include either the costs for the 466 species listed, but not covered by one of the plans or outlays by the private sector. A 1990 audit of the endangered species program by the Department of Interior's Inspector General noted it would take $4.6 billion to recover all listed species and to list and recover the backlog of candidate species. This total is approximately 50 times recent annual budgets for Act implementation. The audit also found that 370 of the then 675 listed species did not have recovery plans as mandated under the Act and that the significant lag in plan preparation was caused in part by inadequate funding (O'Connell 1991; Shaffer 1992:12). The same study found that of the $102 million spent on endangered species by the Department, approximately $55 million was directed to only 12 species. This emphasis on a few species is a manifestation of a "megacharismatic is better" conundrum common to individual spe-
cies protection programs, in which grizzly bears receive many dollars, checkerspot butterflies many fewer.

A true focus on biotic diversity when setting budget priorities would resolve many of these funding issues. First, a shift in spending from protection of individual species to overall protection of ecosystems and natural communities may better serve to prevent the decline of individual species to the point where only extremely expensive, last ditch recovery efforts are necessary. Second, scarce societal resources are distributed more equitably by conserving a broader scope of species, rather than by basing decisions on the charismatic qualities of individual species or because of political pressures.

**Refine the Use of the Traditional Regulatory Process**

The regulatory protections of the ESA can be used in concert with market-based solutions. The Act should be employed to meet ecosystem conservation goals as intended, with the Biological Service engaging in the most constructive possible interactions with the public. There are many emotional and practical reasons for this recommendation. Cases starting with *TVA v. Hill* indicate that the hard fought battles for species protection will not be easily surrendered. Additionally, the environmental community will likely balk at strictly market-based remedies because they fear further losses of habitat and species. While market mechanisms are being developed, it will still be necessary to conserve existing imperiled habitats and to restore other habitats to mitigate the unavoidable impacts of development. The regulatory hammer of the Act may have to be brought down to get all parties to the table. Realistically, for certain key species on the very brink of extinction, ESA protection remains the only option open because opportunities for less restrictive conservation responses have already passed.

The interests of small landowners may also be better served by a more established regulatory approach. Improving certain aspects of the regulatory process may be a simpler, easier means to protecting their interests. Like the large developer, the small landowner wants predictable, reasonable, cost-effective regulation. Hence, early in the process, the government must define as specifically as possible the circumstances and activities that could cause the "take" of a species. Measures to speed up the often protracted and sometimes painful regulatory process may be another way to stem the tide of property takings challenges. Such a speed up would be promoted by "one stop regulatory shopping," where a landowner could receive concurrent federal and state permit approvals. Moreover, resource agencies including the U.S. Fish and Wildlife Service, should redefine the nature of their involvement in endangered species program implementation. If the agencies want to enlist greater support for and participation in species protection, they must take a more active role in providing education and technical assistance to small landowners. Existing institutional review is a black box to many participants in the process. Many stakeholders feel the application of standards is not uniform in the field. This manifestation of poor communication between the agencies and the public contributes to the frustration and anger felt by so many people involved by choice or circumstance with the conservation of imperiled species. In the future, resource agencies are going to have to offer a process that is more iterative, negotiated, and collaborative.

**Conclusion**

A combination of these strategies may allow for the types of compromises that can lead to a situation everyone can live with. No one wins or loses everything. There are many chances for the Act to "flex" while also retaining the substantial protections of the law.

We consciously and constructively decided not to court a full measure of controversy with these recommendations—enough bombast has been offered from other quarters. However, our attempt to chart a reasonable course, to tack in response to the prevailing political winds, by no means changes the fact that the free market economy has contributed greatly to the collapse of biotic diversity in this country. We know that when working within our institutional framework that the primary motivation of the market is to make a profit and the basic strategy is to sell consumerism to the public at the expense of natural resources. Economists understand that the market morality will almost always fail to account for diminished natural capital and that this same market has never been able to value important intangibles, such as losses of species or habitats or in more human terms many of the things that contribute to a good quality of life. To paraphrase Oscar Wilde, the market "knows the price of everything, and the value of nothing" (Gore 1992).

This destructive reality is a blind spot in the market that environmental regulation, including the ESA, has sought to correct. As such, the Act remains a powerful remedy for certain market failures and must be protected if we are to staunch the flow of our Nation's lifeblood, its biological legacy. In that light, it remains a very large question whether the social and political will exists to make the not so painless tradeoffs between economics and conservation and to make them in time to save the ecosystems that humanity depends on. With or without a strong and effective ESA, a declining land base and increasingly scarce natural resources make...
tradeoffs inevitable. Unfortunately, we will much too soon find out if our efforts have been too little and too late.

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