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Redressing the Failure of Environmental Law to Protect Birds and their Habitat

Mary Jane Angelo and Anthony J. Cotter

Pale Male, a Red-tailed Hawk, took up residence on a swanky Fifth Avenue high-rise apartment building across from Central Park over a decade ago. In December 2004, the owners of the co-op destroyed Pale Male's 400 pound nest and removed metal spikes (used to deter pigeons from roosting) that anchored the nest because the bird's droppings marred the building, pieces of nest fell from the building, and the remains of rats and pigeons were scattered around the building. Pale Male's eviction from his high-rise home in New York City made international news. Feathers flew as New Yorkers rallied to Pale Male's aid. The building's owner restored the nesting site by replacing the metal spikes, placing nesting material at the site to encourage Pale Male's return, and positioning guardrails to catch falling material. Pale Male's plight is emblematic of a bigger issue: when habitat is lost or degraded, birds and other wildlife suffer.

When Rachel Carson first expressed her concerns that the use of certain pesticides could result in a dramatic reduction of bird life in her 1962 book, *Silent Spring*, the country had not yet begun to grapple with the significant environmental harms posed by our unfettered use of toxic chemicals and widespread pollution of our air and water. Since that time, the United States has undergone an environmental revolution, with numerous laws and regulations designed to address environmental risk. Despite the complex mosaic of environmental laws, recent scientific studies indicate that Rachel Carson's worst fears could be realized, although not necessarily from the misuse of pesticides alone, but from a number of factors, including poor land use choices that are destroying or diminishing the habitat for birds and other species.

In the fall of 2004, the National Audubon Society (Audubon) published its State of the Birds USA 2004 report in *Audubon* magazine (Audubon Report). A copy of the report may be viewed on the Internet at www.audubon.org/bird/stateofthebirds/. The Audubon Report summarizes the status of 654 bird species native to the continental United States. Birds are placed into one of five general habitat settings: grassland, shrubland, woodland, water, and urban environments. The first four

are elemental habitats. The urban environment, although comprising only 2 percent of the continental United States, was included because its rapid expansion displaces natural habitats.

The Audubon Report is based on data from the U.S. Geological Survey's Breeding Bird Survey from 1966 through 2003, and many of the trends were correlated with data developed from Audubon's annual Christmas Bird Count, perhaps the longest running, most comprehensive survey of avian populations in the country. Using 1966 as the baseline for comparing recent changes in bird populations in the continental United States, the Audubon Report concludes that many bird species significantly declined in population between 1966 and 2003. Although the report does not account for any population changes prior to 1966, it is well documented that many bird species, such as the red-cockaded woodpecker and whooping crane, suffered dramatic population losses prior to 1966.

The population trends vary by habitat type. The Audubon Report indicates that the forty-seven bird species occupying grassland habitats may be at the greatest risk. This category has the highest proportion of species at great risk of extinction. The risk of extinction is also high for shrubland birds. Most shrublands are degraded, and 107 bird species reside in shrubland habitat. Twelve species are of high conservation concern and twenty-four are of moderate concern. One hundred sixty-four avian species occupy woodland habitats. Sixteen of those species are of high concern and another twenty-eight are of moderate concern. For woodland species, the Audubon Report established a declining trend for seventy-six of 164 bird species. Water environments provide habitat for 268 bird species and thirty-nine of these species are declining. However, sixty-seven species are reported to be increasing in population.

The Audubon Report reaches somewhat different conclusions for bird species found in the urban environment. With respect to the forty-five urban bird species, only one, the green parakeet, is of moderate conservation concern. This finding may be due to the fact that although all urban birds are found in natural habitats, these birds adapt to live in urban environments. While seventeen urban species show significant increase in populations, the Audubon Report establishes that the news is not all positive; the populations of nearly half of the urban birds, such as the Chimney Swift, have declined during the report period.

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In addition to the Audubon Report, another significant study on the decline of bird species conducted by researchers at Stanford University was published in the Proceedings of the National Academy of Sciences in 2004. Cagan H. Sekercioglu, Gretchen C. Daily & Paul R. Ehrlich, *Ecosystem Consequences of Bird Declines*, 101 PNAS 18,042–18,047 (2004). This study predicts that by 2100, 10 percent of all bird species are likely to disappear and another 15 percent could be on the brink of extinction.

Reasons for the Decline and the Significance of the Loss of Birds

There are many reasons for population loss. Ornithologists attribute earlier population declines to poisoning of food sources by chemicals like DDT, hunting, habitat loss, habitat degradation, and habitat fragmentation. The Audubon Report suggests that the current population declines are primarily associated with land use and agricultural practices. Some of the most serious threats to birds are habitat loss due to poor land uses, clear-cutting, wetland loss, and urban sprawl. Other serious threats are overgrazing, and competition and predation from invasive species. In the United States, more than 2 million acres of habitat are lost to development each year. With habitat loss comes increased rates of extinction. See REED NOSS & ROBERT PETERS, DEFENDERS OF WILDLIFE, ENDANGERED ECOSYSTEMS: A STATUS REPORT ON AMERICA'S VANISHING HABITAT AND WILDLIFE (1995); see also HOWARD YOUTH, WORLDWATCH PAPER 165, WINGED MESSENGERS: THE DECLINE OF BIRDS 15–22 (2003). In 1990, the Environmental Protection Agency's Science Advisory Board identified extinction of wildlife and habitat loss as two of the highest risks to natural ecology and human welfare.

The predictions of dramatic declines in both bird population numbers and numbers of species over the next century raise one of the most frequently asked questions in environmental and natural resources law—why should it matter to human beings if species or populations of wildlife are lost due to human activity? This question can be answered on several levels. First, there are those who believe that animal species have an inherent value and a right to exist regardless of any direct benefit to humans. Many of these beliefs are rooted in religious traditions that place value on all living things and encourage stewardship of the earth. Related to these concepts are the spiritual, emotional, and aesthetic benefits that wildlife species, including, and perhaps especially, birds provide to human

beings. Large numbers of people enjoy recreational activities, such as bird watching in nature, or hanging bird feeders in their yards to enjoy watching birds and hearing bird songs. In fact, the Audubon Report estimates that in the United States alone, there are approximately 69 million people who watch birds for recreation. Moreover, many of those who do not actively seek out birds as a form of recreation still enjoy seeing and listening to birds. One does not have to venture out in to the wilds to enjoy birds. The image of well-heeled uptown urban New Yorkers rallying to protect Pale Male reminds us that birds are valued and enjoyed in almost any environment.

Besides the enjoyment that birds provide to humans, birds play critical roles as members of ecosystems. Ecosystem services provided by birds include the pollination of many flowering plants, pest control (birds eat rodents, insects, weed seeds, and other pest species), and the dispersal of seeds for plant regeneration. In addition, at least some bird species may play even more critical roles in the functioning of ecosystems by serving as “keystone species.” Keystone species provide more value to the ecosystem than would be predicted by their abundance in the ecosystem. One example of an avian keystone species is the red-cockaded woodpecker (referenced earlier as a species in decline in the Audubon Report). It excavates cavities in living trees, providing habitat for a variety of other species. Many biologists believe that the extinction of a keystone species, like the woodpecker, could trigger large-scale environmental effects, including widespread species extinctions and the alteration or potential collapse of an entire ecosystem.

On a more pragmatic level, birds contribute to our economic welfare in a number of ways. First, the Audubon Report estimates that \$32 billion are spent per year in the United States on bird-watching-related products and services. In addition, the ecological services that are provided by birds, such as pollination and pest control, if lost, could result in significant economic losses to agriculture and other sectors of the economy.

Although the predicted decline of bird populations is cause for concern, the declines may be mere indicators of more substantial issues. The acceleration of habitat destruction in many parts of the United States to build residential and commercial developments is leading to a substantial loss of habitat for many wildlife species. Although the Audubon Report focuses on bird species, birds may simply be the “canary in the coal mine” indicating a problem of a much larger scale. Mammals, reptiles, amphibians, insects and other invertebrates are also

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severely impacted by losses of habitat due to development and other human activities.

Despite many of the advances made in environmental protection through improved air and water quality, there appears to be an ever-increasing problem with wildlife losses due to habitat destruction and other impairments to habitat. In particular, laws that are specifically designed to address bird and other wildlife species, such as the Endangered Species Act (ESA), 16 U.S.C. §§ 1531–1543; the Migratory Bird Treaty Act (MBTA), 16 U.S.C. §§ 703–712; and the federal Clean Water Act (CWA), 33 U.S.C. §§ 1251–1387; do not appear to be accomplishing their respective environmental goals. This article evaluates those laws and suggests ways that the legal framework of protection can be enhanced to protect avian species.

The Federal Role in Avian Species Protection

The most far-reaching wildlife protection law in the United States is the ESA, described as the “most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*, 515 U.S. 687, 698 (1995) (quoting *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978)).

The ESA defines the term “endangered species” as any species that is in danger of extinction throughout all or a significant portion of its range. 16 U.S.C. § 1522(6). Nearly one thousand native animal and plant species are designated endangered on the federal list. The ESA defines the term “threatened species” as any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. *Id.* § 1532(19). Although species may be designated as endangered or threatened on the federal list, for practical purposes, there is little difference between the designations.

A number of protections apply once a bird species is listed. Section 7 directs federal agencies to use their existing authorities to conserve listed species and to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any [listed] species or result in the destruction or adverse modification of [critical habitat] of such species.” 16 U.S.C. § 1536(a)(1)-(2). Section 9 of the ESA prohibits the “taking” of listed species by any person. The ESA broadly defines the term “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” *Id.* § 1532(19). The term “harm” includes acts that involve significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. A limited exemption to the “take” prohibition is provided in Section 10 of the ESA. Under Section 10, one may obtain a permit to “take” a listed species, even if it results in the death of one or more individuals, if the

“taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity” and “will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.” *Id.* § 1539(a)(1)(B). To obtain an incidental take permit, the applicant must develop a “habitat conservation plan” that minimizes and mitigates the impact of the taking to the maximum extent practicable.

Many listed species occur primarily or exclusively on nonfederally owned lands, making management more complicated and controversial. To address such species, the ESA’s implementing agencies, the U.S. Fish & Wildlife Service and the National Marine Fisheries Service (the Services), have jointly developed a “Safe Harbors” policy to encourage and promote the voluntary management of nonfederally owned lands for listed species. The Services enter into “Safe Harbor Agreements” (SHAs) with, and concurrently issue “enhancement of survival” permits to, nonfederal landowners. In the SHA, the landowners agree to undertake activities that protect habitat for listed species. In the permit, the Services provide the landowners with assurances that their voluntary efforts to manage lands for listed species will not result in unspecified future land-use restrictions.

The Services also provide incentives to nonfederal landowners through Candidate Conservation Agreements with Assurances (CCAAs). These agreements address the management of lands for the benefit of proposed or candidate species or species likely to become candidate species. The landowners commit to implementing specific conservation strategies that will remove or reduce threats to the target species, thereby avoiding the need for listing. The management strategies must significantly contribute to eliminating the need for listing the target species. In exchange for the agreement to undertake specific conservation measures, the landowner receives assurances that if the target species is eventually listed, the Services will not require additional restrictions above those expressed in the agreement. As with Safe Harbor Agreements, the Services formalize the assurances in enhancement of survival permits.

Some claim that the ESA is broken, but by what measure? The ESA has been criticized for depriving property owners of the full use of their land, as well as for making species recovery too costly and ineffective. Critics often cite to the low numbers of species delisted due to successful recovery (only six species). Nevertheless, in a 1995 report, the National Research Council (NRC) found evidence that the ESA helps to retard extinctions and that the ESA recovery actions “have helped rescue several species from precarious status.” NATIONAL RESEARCH COUNCIL COMMITTEE ON SCIENTIFIC ISSUES IN THE ENDANGERED SPECIES ACT, SCIENCE AND THE ENDANGERED SPECIES ACT 115–56, 158 (1995). Although the Audubon Report is disconcerting because it reports that nearly 30 percent of bird species are declining in population, the

report also indicates that other species have stabilized or increased, including the bald eagle, American peregrine falcon, and the whooping crane. The survival of these species may be largely attributable to the protection afforded by the ESA.

ESA defenders claim that the problems with the ESA are not organic, but with its implementation. Defenders of Wildlife allege that the current administration is starving the ESA (by severely cutting funding) and taking positions in court contrary to the intent of the ESA. In an article critical of the Bush administration's implementation of the ESA, Oliver Houck was quoted as saying that the Bush appointees are "hostile to the Endangered Species Act." Juliet Eilperin, *Endangered Species Act's Protections are Trimmed*, WASH. POST, July 4, 2004, at A01. To prevent the further diminution of bird populations and to restore the integrity of the ESA, the Services must be fully funded to implement the ESA, including addressing the backlog of listing cases and critical habitat designations.

Critics and supporters alike agree that the ESA should be improved; only the definition of "improvement" is at issue. One suggestion for enhancement would be to amend the ESA to establish statutory standards for habitat conservation plans and to formalize the voluntary conservation programs, such as safe harbor agreements and candidate conservation agreements, which are not referenced in the statute and for which there are no statutory criteria or standards to guide the agencies.

A second suggestion, recommended by some proponents of these agreements, is that safe harbor and candidate conservation agreements be crafted around keystone species based on an ecosystem approach. With respect to bird species, the approach would be to protect the listed or candidate keystone bird species, while also protecting other bird and nonbird species that use the same habitat, thereby avoiding conservation measures that may aid a certain listed or candidate species but lower the habitat value for other species. In return, the property owner would receive the benefit of "no surprises" for future uses of the property.

A second major environmental law protecting bird species is the federal Migratory Bird Treaty Act (MBTA). The MBTA, which dates back to 1918, implements four international treaties designed to protect migratory birds. Unless permitted by regulations, the MBTA makes it unlawful at any time, by any means, or in any manner, to hunt, take, capture, kill, possess, purchase, sell, barter, or transport any protected bird, any part, nest, or egg of a protected bird or any product composed of any part, nest,

or egg of a protected bird. 16 U.S.C. § 703. The MBTA provides criminal penalties for violations. *Id.* § 707. Most violations are considered misdemeanors; however, persons who knowingly violate the act may be liable for a felony conviction. *Id.* § 707(b). Although the term "take" is not defined in the MBTA, regulations define it to mean "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt" any of the foregoing. 50 C.F.R. § 10.12. Courts have found that this language is broad enough to include activities such as accidental poisoning by discharging pesticide waste into a storage pond. *United States v. FMC Corp.*, 572 F.2d 902 (2d Cir. 1978). In contrast, courts have also determined that habitat modifications such as logging activities are not considered to constitute a take under the MBTA. *Seattle Audubon Society v. Evans*, 952 F.2d 297 (9th Cir. 1991). Some, but not all, migratory birds covered by the MBTA also are a listed species under

the ESA and, thus, both Acts would apply to those species. For those species not covered by the ESA, the negative consequences can be significant. The MBTA's narrower definition of "take" means that substantial habitat modification, such as that associated with land development and agriculture, causing death or injury to migratory birds is not prohibited. When the MBTA was adopted, the primary threat to bird populations was over-hunting and exploitation, such as for the hat-feather trade. Today's threats are not adequately addressed by this outdated law, which does not address threats to bird habitat—the most serious threat facing bird populations today.

One suggestion for updating the MBTA would be to amend the act to provide protection for migratory bird

habitat. For example, a program to protect these habitats could be modeled after the Clean Water Act's Section 404 program (discussed later). Impacts to habitats identified as significant for migratory birds could be prohibited unless no other practicable alternative is available and appropriate, and adequate mitigation is provided to compensate for the loss of the upland habitat functions.

In addition to the ESA and the MBTA, the federal CWA § 404 program plays an important role in protecting bird species. Section 404 of the CWA is the key provision of federal law establishing protection for wetlands. 33 U.S.C. § 1344. It prohibits the discharge of dredged or fill materials into waters of the United States, including wetlands, without a permit. Section 404 of the CWA also serves, at least to some extent, as a bird habitat protection law by limiting development in wetlands and requiring mitigation for wetland impacts that are allowed to occur. Despite the Section 404 program, wetland habitat contin-

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ues to decrease due, in part, to certain exemptions to the permitting requirements. One of the most significant exemptions applies to "normal farming, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting or the production of food, fiber, and forest products, or upland soil and water conservation practices." 33 U.S.C. § 1344(f). This exemption has resulted in the loss of vast areas of wetlands due to agricultural activities. As demonstrated in the Audubon Report, agricultural activities are a significant factor in declining bird populations.

For activities that are not exempt, such as most major residential and commercial developments, permits can be obtained provided the applicant can demonstrate that there is no practicable alternative to the proposed activity, the proposed activity will not have significant adverse impacts on aquatic resources, all "appropriate and practicable" mitigation will be employed, and the proposed activity will not violate other state or federal laws (including the ESA). 40 C.F.R. § 230.10. The tendency of the permitting agencies and the courts is to accept the applicant's definition of the purpose of the activity and to support a finding of "no practicable alternative," resulting in the authorization of the majority, provided the estimated impacts are offset by approved mitigation. Although, in theory, wetland mitigation should fully offset the impacts of the filled wetland, many critics question whether a human-created or restored wetland can truly replace the full suite of functions provided by functioning natural wetland systems. Moreover, much of the mitigation has been in a piecemeal and uncoordinated fashion, making monitoring and enforcement of mitigation projects difficult.

Accordingly, although the Section 404 program has provided protections for wetland habitat, the protection may not be adequate to protect wetland species, including the birds that rely on wetland habitat. More importantly, however, is the fact that the Section 404 program generally does not address impacts to upland habitat at all, and there is no analog federal regulatory program for the protection of upland habitat. The Audubon Report conclusions suggest that upland bird species are declining at rates that rival or exceed those of wetland species. Consequently, the Section 404 program does not provide the needed protection for distressed bird populations and, through the haphazard results of its mitigation and focus on wetland impacts and the creation of wetlands in existing upland habitat, may even accentuate harm to upland bird habitat.

To improve the habitat protection value that it affords, the Section 404 program could be revised in a number of ways. First, the agricultural exemption could be narrowed significantly to limit the types of activities that escape the permitting processes, thereby resulting in increased protection. Second, the implementation of the Section 404 program could be improved. For example, instead of accepting permit applicants at their word that there are "no practicable alternatives" to the proposed activity, the regulatory

agencies could more carefully scrutinize the proposed activity to make a more informed determination. Finally, and perhaps most importantly, as described earlier the Section 404 program is designed primarily to address impacts to wetlands and accordingly, does not provide direct protection to the upland habitats where much of the bird declines are occurring. To provide protection to upland species, a new regulatory program could be created modeled on the Section 404 program to protect significant upland habitats for migratory species. For nonmigratory species, Commerce Clause limitations may prohibit such a federal program. Accordingly, regulatory programs to protect upland habitats for nonmigratory species may be more appropriately addressed by state or local governments.

The Role of the States and Local Governments

States historically have played and continue to play an important part in protecting birds and other wildlife. Through regulatory and nonregulatory programs, states may bolster federal protections and complement federal bird recovery efforts. For example, many states have enacted their own versions of the ESA and some of these "state ESA's" include species not protected under the federal ESA.

State programs, however, do not always measure up to their federal counterparts. For example, unlike the federal ESA, most state programs do not address species recovery efforts or habitat protections. Also, in many states, state endangered species programs remain a low priority. Even in states such as California, which has one of the most comprehensive state ESA programs, state listed bird species, such as the California gnatcatcher, continue to decline, are extirpated from their ranges, or have gone extinct. The California gnatcatcher's continued decline is due to the rapid loss and fragmentation of coastal sage scrub habitat due to coastal development. Similarly, despite state ESAs, the endangered short-eared owl in Pennsylvania no longer breeds in the state as a result of the loss and degradation of grasslands, and the Florida scrub jay's habitat is shrinking as the result of encroaching suburban development. These failures, as well as numerous others, are due in part to inadequate, weak, poorly implemented, or underfunded state ESA programs.

States have a public trust responsibility to protect wildlife for the benefit of its citizens; unfortunately, many states have abdicated this responsibility. If species are to survive, every state must do more. States own and manage vast amounts of land. The manner in which a state manages its land can either protect or harm the biodiversity found within its borders.

States should adopt land management policies that promote the preservation of biodiversity and the recovery of listed species on state lands. Biodiversity conservation policy should be integrated into a state comprehensive policy plan that requires state agencies to consider the effects of agency actions on the state's biodiversity and on listed

species. Furthermore, the state biodiversity conservation policy should link biodiversity conservation and listed species protections to growth management at the state and local level.

In addition, all states should adopt a comprehensive species protection law. Species must be listed based on available scientific information, not politics, not socioeconomic realities. Also, the state ESAs should recognize subspecies and unique local populations. Like the Florida and California ESAs, states should adopt a third tier (i.e., a candidate list or "species of special concern"). This lower tier serves to warn decision-makers and the public of an impending crisis if corrective action is not taken.

Corrective actions can occur through regulatory or nonregulatory efforts. On the regulatory side, once a species is listed, the state ESAs must require the timely designation of critical habitat to ensure the species survival. This designation must address habitat loss and devaluation. Along with critical habitat designations, a recovery plan for each listed species and the species habitat is essential and should complement federal recovery efforts. Ideally, critical habitat determinations, as well as recovery plans, should be developed to avoid strategies that favor a particular listed species but, on an ecosystem-level, adversely impact other listed species or species of special concern. The state ESAs should contain broad protections, including prohibiting take through significant habitat modification. These prohibitions should apply to listed plants and listed wildlife, and to public lands and private lands. Exemptions and exceptions to the prohibitions should require permits, and permits for the taking of a listed species should be the exception, not the norm. Furthermore, penalties must be significant in order to serve as a deterrent, and enforcement must be fully funded.

Although the state ESAs must carry a "big stick," they should also be equipped with carrots, too. Incentive programs, such as tax credits for designating lands as critical habitat or providing conservation easements, should be used to encourage and enhance protection and recovery efforts. Another incentive may include direct payment for critical habitat management or recovery efforts. Safe Harbor Agreements and Candidate Conservation Agreements with Assurances should be a key part of any state ESA. These agreements should not only target the welfare of the listed species, but should ensure continued ecosystem viability of the protected habitat.

Along with the states, local governments can play an important role in the survival of avian species and revers-

ing the trends reported in the Audubon Report. At the most basic level, local governments control land-use decisions. Through zoning decisions and other land development approvals, local governments shape development and the impact of development on local ecosystems. Zoning laws and regulations can undermine biodiversity by increasing habitat loss and degradation, or these laws and regulations can help preserve biodiversity by discouraging habitat loss and degradation.

To effectively protect birds and other wildlife, local governments must develop comprehensive plans that establish a sound biodiversity policy and link the development approval processes with the biodiversity policy. Local governments should integrate their biodiversity policies into their comprehensive growth management

plans. This would require local governments to consider the impacts of local land use decisions on regional or state biodiversity. Furthermore, local governments must adopt land development regulations that implement the entity's comprehensive policy plan and does not merely pay lip service to its biodiversity protection policy.

One type of land development regulation underused for species protection is local landscape codes. Landscape codes can promote landscapes beneficial to native species and encourage the use of desirable native plants. Landscape codes can also seek to maintain or create the functions and values provided by the natural habitats impacted by development.

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The Next Century

Recent trends and predictions of declining numbers of birds and likely extinction of bird species over the next century are cause for serious concern. Because the primary causes of bird declines are loss of habitat due to land uses, such as urban and suburban sprawl as well as agricultural land uses, regulatory programs that protect significant habitats are key to the long-term protection of these species. Although government and private land preservation programs certainly can contribute to the protection of bird and other wildlife species, to adequately protect these species, activities on private lands must be addressed as well. Current federal regulatory programs such as the ESA, the MBTA, and Section 404 of the CWA, while providing some protection, do not appear to be sufficient. Accordingly, some rethinking of these federal laws may be warranted. Moreover, proactive biodiversity conservation policies on the state and local levels can stabilize wildlife populations, thereby avoiding the listing of species as endangered or threatened. 