

Statement of Robert L. Glicksman
to the House Oversight and Government Reform Committee’s Subcommittee on Interior
Hearing on “Barriers to Endangered Species Act Delisting, Part I”
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Chairman Lummis, Ranking Member Lawrence, and members of the subcommittee, I appreciate the opportunity to testify today on the implementation and impact of the Endangered Species Act (ESA).

My name is Robert Glicksman. I am the J.B. & Maurice C. Shapiro Professor of Environmental Law at The George Washington University Law School. I am also a member scholar of the Center for Progressive Reform (CPR), although I am here today strictly in my personal capacity. I have taught and written about environmental, natural resources, and administrative law for 35 years, and am a co-author of the leading treatise on public natural resources law.

I make four main points. First, the Endangered Species Act (ESA) has achieved considerable success in achieving its conservation goals. Second, budgetary constraints have prevented the two agencies that oversee implementation of the statute, the Interior Department’s Fish and Wildlife Service (FWS) and the Commerce Department’s National Marine Fisheries Service (NMFS), from compiling an even better track record.¹ Third, citizen participation in ESA implementation has played an important role in promoting the statute’s goals. Fourth, Congress in 1973 had good reasons for allocating to the federal government the primary responsibility for implementing the ESA (although it also sought to solicit state participation, accommodate state wildlife and water resource policies, and encourage federal-state partnerships), and those reasons remain just as valid today as they were then.

¹ For convenience sake, references in this statement to the FWS are often meant to include both agencies.

The Impact of the Endangered Species Act

A common criticism of the ESA is that the small number of species delisted by the FWS since the statute's adoption is a mark of its failure to achieve Congress's goal of conserving endangered and threatened species.² But the number or percentage of listed species that have been delisted is a simplistic and potentially misleading indicator of the ESA's success (or lack thereof).³ About ten years ago, the U.S. Government Accountability Office (GAO) issued a pair of reports assessing the reasons why listed species do or do not recover to the point that justifies delisting them. The GAO acknowledged in one of the reports that "one of the most important measures of [the ESA's] success is the number of species that have 'recovered,' or improved to the point that they no longer need the act's protection."⁴ It added, however, that determining the extent to which the Act's provisions have achieved success is a tricky business: "Supporters of the act claim it is an indication of success that only nine species protected by the act have become extinct. Critics, on the other hand, claim it is an indication of failure that [at that time] only 17 species protected by the act have recovered."⁵ The GAO itself took the position that the number of delistings that have occurred is "not a good gauge of the act's success or failure; additional information on when, if at all, a species can be expected to fully recover and be removed from the list would provide needed context for a fair evaluation of the act's performance. Similarly, estimates of the total costs

² 16 U.S.C. § 1531(c)(1) (2006).

³ The Congressional Research Service reported in 2014 that "[i]n the 40 years since ESA was enacted, 58 U.S. and foreign species or distinct population segments thereof have been delisted." Congressional Research Serv., *The Endangered Species Act (ESA) in the 113th Congress: New and Recurring Issues* 6 (Jan. 13, 2014). Among these are the American alligator, bald eagle, brown pelican (in two areas), peregrine falcon (two subspecies), gray wolf (in four areas), and gray whale (except the Western Pacific Ocean). *Id.* As of April 17, 2016, the FWS listed 63 species as having been delisted. U.S. Fish and Wildlife Serv., Environmental Conservation Online System, http://ecos.fws.gov/tess_public/reports/delisting-report

⁴ U.S. Government Accountability Office, *Many Factors Affect the Length of Time to Recover Select Species*, GAO-06-730, at 1 (2006).

⁵ *Id.* at 2. See also Endangered Species Act, Congressional Working Group, Report, Findings and Recommendations 6 (Feb. 4, 2014), https://drive.google.com/a/law.gwu.edu/folderview?id=0BzLuyVNx7KOIcGxSTUE3YjINQIk&usp=sharing_eid&ts=5712c7fd&tid=0BzLuyVNx7KOId3dlY3RMZU1FZXM.

to recover the species would be necessary to evaluate whether sufficient resources have been devoted to recovery efforts.”⁶

For what it is worth, as of 2014, three times as many species had been delisted as declared extinct since the ESA’s adoption.⁷ Further, by one account, more than 260 species would have disappeared in the U.S. during the ESA’s first 30 years if they had not been listed and protected under the ESA.⁸ In addition, as of 2014, about three dozen species had been downlisted from endangered to threatened.⁹ The condition of other species has improved, though not enough yet to justify delisting them.¹⁰ Still another approach to measuring the impact of the ESA is to assess the proportion of the recovery objectives identified in species recovery plans that have been achieved. The FWS has provided information that is more nuanced than a calculation of the number of delisted species by describing the status of listed species, which covers a spectrum that includes presumed extinct, declining, uncertain, stable, improving, or recovered and delisted.¹¹ One study has found that 90 percent of species are recovering at the rate specified by their federal recovery plans.¹²

⁶ U.S. Government Accountability Office, *Endangered Species: Time and Costs Required to Recover Species Are Largely Unknown*, GAO-06-463R, at 1 (2006). See also *id.* at 5 (“The success of the Endangered Species Act is difficult to measure because some of the recovery plans we reviewed indicated that species were not likely to be recovered for up to 50 years. Therefore, simply counting the number of extinct and recovered species periodically or over time, without considering the recovery prospects of listed species, provides limited insight into the overall success of the services’ recovery programs.”).

⁷ Congressional Research Serv., *supra* note 2, at 6.

⁸ Alisha Falberg, *The Pricelessness of Biodiversity: Using the Endangered Species Act to Help Combat Extinction and Climate Change*, 33 UCLA J. L. & PUB. POL’Y 135, 154 (2015).

⁹ *Id.*

¹⁰ *Id.* at 6-7. See also Daniel B. Evans et al., *Species Recovery in the United States: Increasing the Effectiveness of the Endangered Species Act*, 20 ISSUES IN ECOLOGY 1, 1 (Winter 2016) (“The [ESA] has succeeded in shielding hundreds of species from extinction and improving species recovery over time.”).

¹¹ See, e.g., See U.S. Fish and Wildlife Serv., *Report to Congress on the Recovery of Threatened and Endangered Species, Fiscal Years 2009-2010*, at 10-47. By one recent account, 43% of endangered species on the list are considered stable or improving, 30% are considered in decline, 24% are considered in unknown status, while only 1% is believed extinct. Nicholas Primo, *Federal v. State Effectiveness: An Analysis of the Endangered Species Act and Current Attempts at Reform*, 7 PEPPERDINE POL’Y REV., Article 5, at 4 (2014), <http://digitalcommons.pepperdine.edu/ppr/vol7/iss1/5/>.

¹² Daniel J. Rohlf, *The Endangered Species Act at Forty: The Good, the Bad, and the Ugly*, 20 ANIMAL L. 251, 273 (2014) (citing Kieran Suckling et al., Ctr. for Biological Diversity, *On Time, On Target: How the Endangered Species*

For these reasons, the FWS has rejected delisting as the most accurate benchmark for the ESA's success. It has argued that:

the success of the Service and the Endangered Species Act (ESA) cannot be measured in delisting alone. Instead, the Service's effectiveness in its implementation of the ESA should be measured in the number of species that have been saved from extinction since their listing, the number of populations that have been stabilized since a species' listing, and the number of populations that have increased since a species' listing even if the species has not been delisted.¹³

Moreover, recovery is not necessarily quick, linear, or uniform across listed species. Based on a review of 31 species listed at the time, the GAO concluded about ten years ago that:

Many factors affect the length of time it will take to recover the 31 species we reviewed, and some may not be recovered at all. These factors range from the successful removal of the primary threat faced by a species, to difficulty protecting a species' habitat or difficulty understanding what threats a species is facing. The length of time it has taken, or is expected to take, to recover these species, ranges from less than a decade to possibly more than a century.¹⁴

For example, FWS biologists told the GAO that 12 of the 31 species the GAO studied could spend more than 50 years on the endangered species list, and some might never recover. The agency's biologists predicted that some species would not recover for many decades, not because the ESA is an ineffective vehicle for promoting recovery, but because those particular species are slow to

Act Is Saving America's Wildlife (May 2012), http://www.esasuccess.org/pdfs/110_REPORT.pdf [<http://perma.cc/5VQW-M9F4>].

¹³ U.S. Fish and Wildlife Serv., *Report to Congress on the Recovery of Threatened and Endangered Species, Fiscal Years 2009-2010*, at i.

¹⁴ U.S. Government Accountability Office, *Many Factors Affect the Length of Time to Recover Select Species*, GAO-06-730, at 3 (2006).

respond to recovery efforts.¹⁵ Some species, such as the northern right whale and the whooping crane, have a very low population and reproduce slowly or depend on habitat that takes a long time to develop. Others, such as the Indiana bat, face continuing threats that have not yet been abated. The recovery prospects of still other species were slowed because the FWS was having difficulty securing needed habitat, or because the agency lacked critical information about the threats facing the species or how to mitigate them. It is useful to recall that the ESA's listing provisions only kick in when a species, at best, is likely to be in danger of extinction within the foreseeable future. With this "emergency room" focus, it is not surprising that species recovery that justifies delisting can be a lengthy process.¹⁶ Weakening protections for listed species and their habitat would be the worst possible way to increase the pace of species recovery, just as kicking a sick person out of the hospital before she's completely well is the worst way to heal someone.

Ultimately, the GAO concluded that:

For all but one of the species we reviewed, recovery plans played an important role in recovery efforts by identifying many of the actions that the services' biologists deem most important to the recovery of the species. Although not all of these species are nearing recovery, the services' biologists report that the success that these species have had can be attributed, at least in part, to actions in the species' recovery plans.¹⁷

¹⁵ See U.S. Fish and Wildlife Serv., *Report to Congress on the Recovery of Threatened and Endangered Species, Fiscal Years 2009-2010*, at i:

[R]ecover cannot be fully measured by delistings and reclassifications from endangered to threatened (downlistings) alone. Most species' declines occur over decades and centuries prior to their listing, thus it may take many years and generations of a species before that species may be delisted or downlisted. Upon their listing, most species are so critically imperiled that the Service must first focus on population stabilization efforts in order to impede the species' rapid progression towards disastrously low population levels.

¹⁶ U.S. Government Accountability Office, *Many Factors Affect the Length of Time to Recover Select Species*, GAO-06-730, at 3-4 (2006).

¹⁷ *Id.* at 4.

In particular, the GAO found that of the 31 species it studied, implementation of ESA recovery plans was the primary driver in recovery that had already occurred or was expected to occur.¹⁸

Resource Constraints

To the extent that the ESA is not operating in the way Congress intended, or is not promoting the degree of species conservation it is capable of achieving, resource constraints are surely a factor. For more than 20 years, Congress has funded the ESA through annual appropriations at levels inadequate to enable the FWS to comply with its statutory duties on a timely basis. As one researcher succinctly put it, the “[a]gencies responsible for recovery of listed species are faced with an increasing workload and decreasing resources.”¹⁹ Others have estimated that over the past 15 years, total spending in protecting listed species has covered only about a third of their recovery needs.²⁰ A study by the Center for Biodiversity Outcomes and School of Life Sciences at Arizona State University published last month in the *Proceedings of the National Academy of Sciences* found “a strong correlation between recovery funding and [species] status. In particular, funding influences the relative frequency of success (i.e., increasing population) and failure (i.e., decreasing population) for listed species.”²¹ The study’s author found that only about 12 percent of listed species are receiving as much or greater funding than prescribed in their recovery plans, but that recovery goals are 2.5 times more likely to be met for those species than for those inadequately funded. Conversely, “among species in a state of injurious neglect, more than 100 species are receiving less than 10% of the investment needed as defined by their recovery plans.”²²

¹⁸ *Id.* at 19-20.

¹⁹ Leah R. Gerber, *Conservation triage or injurious neglect in endangered species recovery*, 113 PROCEEDINGS OF THE NAT’L ACAD. SCI. 3563, 3565 (Mar. 29, 2016).

²⁰ Evans, *supra* note 10, at 10.

²¹ Gerber, *supra* note 19, at 3564.

²² *Id.*

Further, federal expenditures are concentrated on a small number of listed species. Between 1998 and 2012, for example, “80 percent of all government spending went to support 5 percent of all listed species, whereas 80 percent of all listed species shared less than 5 percent of all funds.”²³ Part of the reason for this distribution has been congressional earmarks that “limit the Services’ abilities to distribute funds more equitably.”²⁴ In addition, discretionary allocation of funds by the FWS are not always driven by the comparative biological needs of listed species, but may be influenced by factors such as congressional representation, staff workload, and opportunities to secure matching funds.²⁵ The FWS seems especially resource poor compared to the NMFS. Even though the FWS manages more than 15 times as many listed species as the NMFS does, the 2012 FWS budget for endangered species management was \$161 million, while the NMFS budget for ESA and related Marine Mammal Protection Act implementation during that same time was \$174 million.²⁶

One result of the agency’s limited funding has been that recovery plans have not always included measures biologists deemed important to species recovery. Worse yet, resource constraints have contributed to the FWS’s failure to even develop recovery plans for some listed species.²⁷ By necessity, the FWS has sought to prioritize its efforts to promote the recovery of listed species based on factors such as (1) the degree of threat confronting the species, (2) recovery

²³ *Id.* For figures on how much money was spent on each listed species in fiscal year 2014, see U.S. Fish and Wildlife Service, *Federal and State Endangered and Threatened Species Expenditures: Fiscal Year 2014*, https://drive.google.com/a/law.gwu.edu/folderview?id=0BzLuyVNx7KOIYUVBT3IPQThaSk0&usp=sharing_eid&ts=5712c7fd&tid=0BzLuyVNx7KOId3dlY3RMZUIFZXM.

SPECIES EXPENDITURES

²⁴ Evans, *supra* note 10, at 10.

²⁵ *Id.* at 11.

²⁶ Natalie Lowell & Ryan P. Kelly, *Evaluating agency use of “best available science” under the United States Endangered Species Act*, 196 BIOLOGICAL CONSERVATION 53, 58 (2016).

²⁷ See U.S. Government Accountability Office, *Endangered Species Act: Many GAO Recommendations Have Been Implemented, but Some Issues Remain Unresolved*, GAO-09-225R, at 5 (2008) (listing figures for number of listed species and approved recovery plans).

potential (the likelihood for successfully recovering the species), and (3) taxonomy (genetic distinctiveness). Nevertheless, the agency has spent no money at all promoting recovery of some listed species for significant periods of time.²⁸ The GAO summarized the agency's plight as follows:

The Service faces a very difficult task—recovering more than 1,200 endangered and threatened species to the point that they no longer need the protection of the Endangered Species Act. Many of these species face grave threats and have been imperiled for years. There are few easy solutions. Like many other federal agencies, the Service has limited funds with which to address these challenges.²⁹

Congress should redress the chronic underfunding of the ESA, as FWS Director Dan Ashe has called on it to do. He has also recommended increasing financial incentives for species conservation by private landowners.

Instead of continuing or increasing programs that assist states and private parties in conserving listed species, Congress is cutting or ending these effective programs. For example, Congress has balked at reauthorizing the Land and Water Conservation Fund despite overwhelming support from the states. Money from the Fund helps states and federal agencies protect habitat for listed species. The House also voted to cut funds for the Conservation Stewardship Program, which among other things helps farmers protect biodiversity on their land.

The Role of Citizen Petitions and Listing Suits

Some observers trace the resource quandary facing the FWS to the activities of citizen groups who have sought to compel the agency to list additional species or designate critical habitat

²⁸ See U.S. Government Accountability Office, *Fish and Wildlife Service Generally Focuses Recovery Funding on High-Priority Species, but Needs to Periodically Assess Its Funding Decisions*, GAO-05-211, at 13 (2005).

²⁹ *Id.* at 30.

for species for which such habitat has not been identified. Aside from the usual ability of interested persons to provide input through the notice and comment rulemaking process, the ESA contains two principal mechanisms for participation by individuals and groups in its implementation. First, § 4(b) of the ESA requires the FWS, in accordance with a specified schedule, to respond to petitions by interested persons to add a species to or remove a species from the list of endangered or threatened species or to revise a critical habitat designation.³⁰ Second, like many of the federal environmental statutes, the ESA includes a citizen suit provision. These provisions typically authorize two kinds of actions: suits against regulated entities alleged to be in violation of statutory or regulatory provisions, and suits against the agencies responsible for administering the statutes for failure to perform nondiscretionary duties – i.e., those that Congress compelled the agency to take but which the agency has failed to take.

Congress has consistently recognized the vital role that citizens can play in helping to assist in the enforcement of laws that range from civil rights, voting rights, consumer protection, and environmental statutes, among others. Citizen suit provisions and other avenues for judicial review of agency decisions are critically important tools for ensuring that individuals and groups from across the political spectrum and with a wide range of interests can solicit the aid of the federal courts in promoting the accountability of administrative agencies and prevent them from straying from the constraints Congress placed on them when it delegated authority to them to administer these laws. In the context of the ESA, both those contending that agencies have been too aggressive and those arguing they have not been aggressive enough in species protection efforts – those who want less government intervention and those who want more – have consistently taken

³⁰ 16 U.S.C. § 1533(b)(3)(A) (2006).

advantage of these avenues of access to the courts. The founding fathers understood the need for an independent judiciary to hold other branches of government accountable.

The ESA's citizen suit provision authorizes both suits to enforce the ESA's provisions and suits to compel the FWS to perform nondiscretionary duties (what I have referred to as agency-forcing suits).³¹ Under the ESA, a citizen suit against the FWS to compel the performance of nondiscretionary duties covers alleged violations of § 4 of the statute, which governs decisions concerning species listings and critical habitat designations.³² Like other environmental citizen suit provisions, the ESA's provision allowing suits to compel performance of nondiscretionary duties is conditional. Litigants must provide the FWS with 60 days prior notice,³³ which provides a window of opportunity for the agency to settle with the prospective plaintiff before suit is even commenced.³⁴

Senator Edmund Muskie, the principal drafter of the Clean Air and Water Acts, justified legislation authorizing agency-forcing suits prior to the adoption of the Clean Air Act in 1970:

The concept of compelling bureaucratic agencies to carry out their duties is integral to democratic society. . . . The concept in this bill is that administrative failure should not frustrate public policy and that citizens should have the right to seek enforcement where administrative agencies fail.³⁵

Agency-forcing suits can enhance agency accountability, increase opportunities for citizen participation in the policymaking process, and induce agencies to overcome political obstacles to

³¹ Robert L. Glicksman, *The Value of Agency-Forcing Suits to Enforce Nondiscretionary Duties*, 10 WIDENER L. REV. 353 (2004).

³² 16 U.S.C. § 1540(g)(1)(C) (2006).

³³ 16 U.S.C. § 1540(g)(2)(C) (2006).

³⁴ Kirsten Nathanson, Thomas R. Lundquist & Sarah Bordelon, *Developments in ESA Citizen Suits and Citizen Enforcement of Wildlife Laws*, 29-Wint. NAT. RESOURCES & ENV'T 15, 16-17 (2015).

³⁵ 1 COMM. ON PUB WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS OF 1970, at 351 (1970) (remarks of Se. Muskie).

following legislative instructions.³⁶ Although agency-forcing suits may take a toll on agency autonomy, and interfere with agency agenda-setting and priorities, these factors should take a back-seat when litigants ask courts to compel agency compliance with nondiscretionary duties that Congress has seen fit to impose on the agency, thereby divesting the agency of autonomy with respect to performance of that duty.

The ESA's citizen suit provision rests on these same foundations. The rationale for allowing citizens to sue the agency for failing to comply with nondiscretionary statutory duties relating to species listings was to address Congress's concern that "political pressure might discourage the agencies from listing species that warranted protection."³⁷ Further, there is evidence that citizen suits and listing petitions are serving their intended functions. Professor Holly Doremus has concluded that citizen suits "have played an important role in almost every phase of ESA implementation, including obtaining the protections of the ESA for noncharismatic species."³⁸

There is no doubt that the FWS faces a backlog in responding to petitions for listing-related actions. But, according to one account, "[a] major reason for this backlog is that the FWS contrived its own lawful impediment for funding species protection when it requested and received a budget cap from Congress for its final listing decisions,"³⁹ which has been in effect since 1998. These efforts to bolster the FWS's ability to defend its delayed action in the face of citizen petitions appear counter-intuitive in that they respond to resource shortages by seeking to reduce agency

³⁶ Glicksman, *Agency-Forcing*, *supra* note 31, at 383.

³⁷ Candee Wilde, *Evaluating the Endangered Species Act: Trends in Mega-Petitions, Judicial Review, and Budget Constraints Reveal a Costly Dilemma for Species Conservation*, 25 VILLANOVA ENVTL. L.J. 307, 315 (2014).

³⁸ Holly Doremus, *Adaptive Management, the Endangered Species Act, and the Institutional Challenges of "New Age" Environmental Protection*, 41 WASHBURN L.J. 50, 58 (2001).

³⁹ Wilde, *supra* note 37, at 329. See also Eric Biber, *A Risky FWS Proposal to Limit ESA Petitions* (Apr. 4, 2011), <http://legal-planet.org/2011/04/04/a-risky-fws-proposal-to-limit-esa-petitions/> ("One reason FWS has so many deserving species waiting for listing is that for years Congress (at FWS's request) has placed a cap on the amount of money that can be spent on finalizing listing decisions.").

funds still further.⁴⁰ The agency's task has only become more onerous as increasing numbers of species merit the ESA's protections. According to ESA expert Dan Rohlf, "[i]n an age of accelerating threats to biodiversity," which include from habitat loss from climate change and the proliferation of invasive species, the budgets for Fish and Wildlife Service have not even been close to keeping up with the demands on the agency."⁴¹

The diversion of FWS resources from species and actions on which the agency prefers to focus to matters that are the subject of citizen petitions and citizen suits might be troublesome if the result has been to shift protection and recovery efforts from species with more urgent needs to those with less. But this does not seem to be the case. A recent empirical analysis of ESA-listed species compares FWS-initiated species with species whose listing processes were initiated by citizen petition or agency-forcing litigation.⁴² The study's authors concluded that "citizen-initiated species (petitioned and/or litigated) face higher levels of biological threat, and that "[l]itigated species are more threatened than nonlitigated."⁴³ In addition, they found that citizen-initiated species are more likely to be in conflict with development, and that species in conflict with development face greater biological threat levels than species not in conflict with development.⁴⁴ These findings led them to conclude that "[c]itizen groups play a valuable role in identifying at-risk species for listing under the ESA. . . . Our findings thus do not support calls for reducing or eliminating citizen involvement in the ESA."⁴⁵ They added:

Contrary to criticisms of citizen involvement in the ESA, petitions and litigation are potentially very important in selecting species worthy of protection. In many cases, outside

⁴⁰ Wilde, *supra* note 37, at 330.

⁴¹ Todd Woody, *Wildlife at Risk Face Long Line at U.S. Agency*, N.Y. TIMES, Apr. 20, 2011 (quoting Rohlf).

⁴² Berry J. Brosi & Eric G.N. Biber, *Citizen Involvement in the U.S. Endangered Species Act*, 337 SCI. 802 (Aug. 17, 2012).

⁴³ *Id.* at 802.

⁴⁴ *Id.*

⁴⁵ *Id.* at 803.

groups could serve as the only impetus for protection of biologically threatened taxa that would otherwise be ignored because they conflict with development projects and related political pressures or because they are low-profile subspecies.⁴⁶

The study stated that limited FWS budget and staff make it unlikely that the agency “will ever contain enough expertise to identify all species most worthy of protection”⁴⁷

One logical solution to both the resource constraints facing the FWS and the backlog of listing (and delisting)-related actions it faces would be to provide the agency with more, not less funding. As one observer explained:

Increased funding would ultimately benefit the FWS because it would allow the FWS to exercise higher quality decision-making. With more money, the FWS could increase staffing in order to address its requirements under the ESA effectively. Further, adequate funding would give the FWS the resources needed to take thought-out, timely action, which would result in a greater unlikelihood that courts find the FWS's actions arbitrary and capricious in judicial review suits.⁴⁸

It is important to note that after a settlement with environmental groups who had agency-forcing actions to list additional species, the FWS is good progress in clearing its backlog of more than 250 species that FWS had said deserve protection of the ESA, but for which the agency had said it lacked the resources to go through the process to actually list them. For several of these species, including the sage grouse, the FWS eventually found that it no longer needed to list them after the agency, in consultation with states and private landowners, helped devise cooperative conservation strategies that avoided the need for listing.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ Wilde, *supra* note 37, at 339.

Recovery of Attorney's Fees

Under the so-called American Rule, the losing party in litigation is responsible for paying its own attorney's fees.⁴⁹ But Congress has created exceptions to that rule. In the Equal Access to Justice Act (EAJA) and in the judicial review provisions of many of the federal environmental statutes, Congress has authorized recovery of reasonable, market-based fees by prevailing parties. The ESA includes such a provision, which applies to citizen suits seeking to compel compliance with the FWS's listing duties, and which allows courts to require the government to reimburse successful citizen suit plaintiffs for reasonable attorney's fees.⁵⁰ These provisions are designed to facilitate individuals and groups to participate in statutory implementation and enforcement by acting as "private attorney generals."⁵¹ The Supreme Court recognized decades ago that a citizen bringing an enforcement action "does so not for himself alone but also as a 'private attorney general,' vindicating a policy that Congress considered of the highest priority."⁵²

Congress enacted citizen suit provisions like the one in the ESA to help hold agencies accountable.⁵³ The fee-shifting provisions of the ESA and similar legislation are designed to enable ordinary citizens to take steps to ensure that agencies comply with statutory directives and implement the laws as Congress intended. Efforts to cap or otherwise restrict the recovery of market-based fees by litigants who succeed in demonstrating that the government has violated the law will only make it more difficult for citizens to hold agencies accountable in this manner. As the Supreme Court has noted, if a citizen lacks the resources to pursue an action to assure

⁴⁹ *Alyeska Pipeline Serv. Co. v. Wilderness Soc'y*, 421 U.S. 240 (1975).

⁵⁰ 16 U.S.C. § 1540(g)(4) (2006) (authorizing fee awards "whenever the court determines such award is appropriate"). The Supreme Court has interpreted similar language in other environmental statutes to restrict fee awards to prevailing parties. *See Ruckelshaus v. Sierra Club*, 463 U.S. 680 (1983).

⁵¹ *See S. REP. NO. 92-414*, at 79080 (1971).

⁵² *Newman v. Piggie Bank Enter., Inc.*, 390 U.S. 400, 402 (1968).

⁵³ *See Robert V. Percival & Geoffrey P. Miller, The Rof of Attorney Fee Shifting in Public Interest Litigation*, 47 L. & CONTEMP. PROBS. 235 (1984).

compliance with the law, “his day in court is denied him [and] the congressional policy which he seeks to assert and vindicate goes unvindicated.”⁵⁴ Further, as FWS Director Ashe has pointed out, the amount of money the government pays out in attorney’s fees in ESA litigation is only a small fraction of the millions it spends each year implementing the statute.⁵⁵ He has characterized the operation of the citizen suit and attorney’s fee provisions as a strength, not a weakness, of the ESA.⁵⁶

Suits for civil rights violations and denial of veterans and social security benefits result in the vast majority of fee awards against government agencies. Broad-reaching efforts to eliminate or reduce these fee-shifting provisions would therefore penalize veterans and individuals who have been treated unjustly by federal agencies. Landowners and industry groups who successfully challenge agency decisions under the ESA are also entitled to fee awards, so that fee recovery is not limited to environmental public interest groups seeking additional listings. More targeted efforts directed at environmental public interest groups would be difficult to justify on equity grounds.

Judicial Review of Agency Science

The ESA requires the FWS to make its listing and delisting decisions on the basis of “the best scientific and commercial data available.”⁵⁷ Courts have construed the “best data available” language as not obligating the FWS to conduct studies to obtain missing data, but it cannot ignore relevant available biological information.⁵⁸ Judicial review of agency scientific determinations

⁵⁴ *City of Riverside v. Rivera*, 477 U.S. 561, 575 (1986).

⁵⁵ A Government Accountability Office Report issued last year found that FWS data show that the agency paid about \$1.6 million in attorney’s fees in the 26 cases from fiscal years 2004 through 2010. U.S. Gov’t Accountability Office, *Information on Cases against EPA and FWS and on Deadline Suits on EPA Rulemaking*, GAO-15-803T, at 13 (2015).

⁵⁶ Laura Peterson, *Lawsuits Not Hurting Endangered Species Act – FWS Director*, GREENWIRE, July 5, 2012.

⁵⁷ 16 U.S.C. § 1533(b)(1)(A) (2006).

⁵⁸ *Friends of Blackwater v. Salazar*, 691 F.3d 428, 434 (D.C. Cir. 2012); Congressional Research Serv., *supra* note 6, at 8-9.

under the ESA tends to be deferential. This approach is consistent with how courts in a variety of contexts have reviewed agency scientific determinations under a host of environmental laws. They have afforded considerable deference to such determinations – what some observers have referred to as “super deference”⁵⁹ – in applying the Administrative Procedure Act’s arbitrary and capricious standard of review.⁶⁰ The courts are typically wary of second-guessing the scientific expertise of the agencies, which they cannot hope to match.

Yet, the courts regard themselves as competent to remand to the agency if the agency’s reasoning process in support of its scientific determinations is flawed. For example, courts in environmental cases, including but not limited to ESA cases, will remand if the agency’s decision failed to explain how it moved from one step in a supposedly logical reasoning process to another, did not articulate at all how it dealt with a relevant statutory factor, rested on evidence that lacked any basis in the administrative record, or was internally inconsistent. In each instance, the deficiency is a gap in the agency’s chain of reasoning.⁶¹ In assessing judicial review of U.S. Forest Service decisions under the National Forest Management Act’s mandate to preserve biological diversity in the national forests as well as decisions implementing the ESA, I concluded several years ago that “[t]he courts have been wary of second-guessing the manner in which the environmental agencies have interpreted and applied science.”⁶² Notwithstanding this deferential posture, courts did invalidate science-based decisions in circumstances such as an agency’s

⁵⁹ See, e.g., Emily Hammond, *Super Deference, the Science Obsession, and Judicial Review as Translation of Agency Science* 109 MICH. L. REV. 733 (2011).

⁶⁰ 5 U.S.C. § 706(2)(A) (2006).

⁶¹ Christopher H. Schroeder & Robert L. Glicksman, *Chevron, State Farm and EPA in the Courts of Appeals in the 1990s*, 31 ENVTL. L. REP. 10351, 10403 (Apr. 2001).

⁶² Robert L. Glicksman, *Bridging Data Gaps through Modeling and Evaluation of Surrogates: Use of the Best Available Science to Protect Biological Diversity Under the National Forest Management Act*, 83 IND. L.J. 465, 483 (2008).

application of a model based on assumptions that were obviously flawed or arbitrary.⁶³ I believe this remains an accurate depiction of judicial review of agency scientific determinations in federal environmental cases, including those decided under the ESA. Courts have also reversed listing decision that were based on extraneous factors, such as political pressure from elected state officials, or when the agency's decision was inconsistent with the recommendations of its own staff scientists.⁶⁴ These situations tend to raise red flags that the decision was not solidly grounded in the science and that courts should scrutinize the scientific record more closely than they ordinarily would be willing to do.

Every case has a winning and a losing side. Sometimes the party unhappy with the result is the agency, sometimes it is an environmental NGO, and sometimes it is a commercial entity affected by the agency's decision to permit or restrict development. Just because that party does not like the court's result does not necessarily mean that the court applied insufficiently rigorous or excessive scrutiny to the scientific determinations of the agency whose decisions were at issue.

Federal vs. State Authority to Manage Wildlife

Beginning in 1970, Congress chose to carve out an expanded role for the federal government in environmental protection. It did so for a host of well understood reasons relating to collective actions problems that include the advantages of resource pooling, a desire to restrict negative inter-jurisdictional spillovers, and an effort to put a stop to the anticipated race to the bottom. I will not explain here these justifications for a strong federal presence, although I have

⁶³ *Id.* at 485. See also Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act's Best Available Science Mandate*, 34 ENVTL. L. 397 (2004) (describing willingness of courts in some cases to reverse agency decisions based on scientific determinations).

⁶⁴ *E.g.*, *Save Our Springs v. Babbitt*, 27 F. Supp. 2d 739, 745, 748 (W.D. Tex. 1997).

done so in my scholarship.⁶⁵ Suffice it to say that these remain persuasive reasons for federal leadership on endangered species protection.⁶⁶

At the same time, Congress recognized that states had long played a leading role in wildlife management, and it did not seek to oust the states from that role. Instead, it accommodated state authority and policies, to the extent they do not conflict with federal law, and it encouraged active state involvement in ESA implementation.⁶⁷ Section 6 of the ESA, for example, requires the FWS to cooperate “to the maximum extent practicable” with the states and authorizes federal financial assistance to states entering cooperative agreements for state establishment of adequate and active programs for species conservation.⁶⁸

In recent years, the FWS has cooperated with the states on significant issues related to endangered species. For example, I already referred to cooperative efforts with the states that led to a decision not to list the sage grouse. The same kind of process avoided the need to list dunes sagebrush lizards. The FWS has also used its authority under § 4(d) of the ESA⁶⁹ to tailor protections for threatened species in a way that largely defers to state authority – northern long-

⁶⁵ See Robert L. Glicksman & Richard E. Levy, *A Collective Action Perspective on Ceiling Preemption by Federal Environmental Regulation*, 102 NW. U. L. REV. 579 (2008); Robert L. Glicksman, *Climate Change Adaptation: A Collective Action Perspective on Federalism Considerations*, 40 ENVTL. L. 1159 (2010).

⁶⁶ See, e.g., Primo, *supra* note 11, at 10:

The federal government, for all of its slow and bureaucratic methods of implementing any policy, has the most resources, the widest scope and the greatest authority to gather and disseminate important information crucial to formulating policies. This is especially the case for environmental policy, as only the federal government has the resources and manpower to fund government research on the latest methods of species protection and conservation. Only the federal government has the scope to study and interact with all 50 states to see emerging trends as well as dangers to the species that inhabit the country. Without the federal government through its stewardship from the Secretary of the Interior and the policy actions of the USFWS, states would struggle greatly not only to innovate but to maintain their endangered species protective policies, if not fail outright.

⁶⁷ See, e.g., 16 U.S.C. § 1531(a)(5) (2006) (encouraging states to develop and maintain conservation programs that meet national and international standards); *id.* § 1501(c)(2) (declaring federal policy of cooperation with state and local agencies to resolve water resource issues in conservation of endangered species).

⁶⁸ 16 U.S.C. § 1535(a), (c)-(d) (2006). See also *id.* § 1535(f) (saving state laws that do not conflict with the ESA).

⁶⁹ 16 U.S.C. § 1533(d) (2006).

eared bats are a recent example. And the FWS has largely deferred to the state of Florida to authorize actions that “incidentally take” threatened species.⁷⁰

Although some states have taken up the challenge and become active participants in ESA protection efforts, others have been more reluctant, or have adopted different priorities than those reflected in the ESA. For example, Congress passed an appropriations rider in 2011 delisting gray wolves in Montana and Idaho, but not Wyoming, based on the two states’ efforts to adopt adequate protective measures.⁷¹ Wyoming subsequently revised its wolf management plan, which the FWS accepted. But a court rejected the agency’s decision to delist the wolf in Wyoming because the state’s plan lacked binding commitments to implement the regulatory mechanisms needed to protect the wolf.⁷² The court rejected a challenge to the agency’s scientific determinations, however, deferring to the FWS’s finding of sufficient genetic exchange between Wyoming wolves and other populations of wolves in the northern Rocky Mountains, and characterizing the plaintiff’s challenge as amounting to “nothing more than competing views about policy and science.”⁷³ The court also found the FWS’s analysis of what constituted a “significant portion of the [wolf’s] range” to be reasonable. Some observers have attributed the court’s rejection of the Wyoming plan to the state’s “reticence to commit to wolf recovery,” and in particular, to “adopt regulatory mechanisms to supplant the ESA’s protection from human caused mortality.”⁷⁴ The court’s rejection of the plan, in this view, reflected neither overly rigorous judicial review of the FWS’s scientific determinations nor an attempt by Congress or the FWS to shut the state out of

⁷⁰ See Nathan Hale, *Enviros Balk at Federal Plan To Let Florida Enforce ESA*, LAW 360 (Mar. 29, 2013), <http://www.law360.com/articles/428540/enviros-balk-at-federal-plan-to-let-florida-enforce-esa>.

⁷¹ Department of Defense and Full-Year Continuing Appropriations Act of 2011, Pub. L. No. 112-10, § 1713, 125 Stat. 38 (2011).

⁷² *Defenders of Wildlife v. Jewell*, 68 F. Supp. 3d 193 (D.D.C. 2014). That decision is currently pending on appeal.

⁷³ *Id.* at 207.

⁷⁴ Martha Williams, *Lessons from the Wolf Wars: Recovery v. Delisting under the Endangered Species Act*, 27 FORDHAM ENVTL. L. REV. 106, 148-49, 155 (2015).

the process of crafting species protection policies. Rather, the decision was based on the court's determination that the statute precludes delisting absent a demonstration of the state's commitment to taking the steps needed to prevent species from slipping back into danger.

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Professional Honors and Awards

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Horatio G. Warner Prize (for the Senior A.B. with highest scholastic standing while retaining the highest personal character) (1973)

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Publications

Books

DEVELOPING PROFESSIONAL SKILLS IN ENVIRONMENTAL LAW (West, scheduled for publication in 2016) (with S. Zellmer).

ENCYCLOPEDIA OF ENVIRONMENTAL LAW: ENVIRONMENTAL DECISION MAKING (Edward Elgar Pub. Ltd., scheduled for publication in 2016) (R. Glicksman, L. Paddock & N. Bryner eds.).

ENVIRONMENTAL PROTECTION: LAW AND POLICY (7th ed. Aspen Publishers) (with D. Markell, B. Buzbee, D. Mandelker, D. Bodansky & E. Hammond) (2015) (website at <http://lawstudy.law.ku.edu/glicks/envprot>) (previous editions published in 1999, 2003, 2007, and 2011).

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MONITORING AND ENFORCEMENT (Stanford University Press 2011) (with D. Earnhart).

PUBLIC NATURAL RESOURCES LAW (4 volumes, Thomson/West, updated three times annually)
(2d ed. 2007) (with G. Coggins) (1st edition published in 1991, with updates two to three
times a year between 1991-2011).

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2003) (with S. Shapiro).

MODERN PUBLIC LAND LAW IN A NUTSHELL (4th ed. West) (2012) (with G. Coggins) (previous
editions published in 1995, 2001, and 2006).

NEPA LAW AND LITIGATION (Thomson Reuters 2015) (with D. Mandelker and others) (published
annually)

REGULATION OF TOXIC SUBSTANCES AND HAZARDOUS WASTE: CASES, MATERIALS, NOTES, AND
QUESTIONS (1992) (unbound) (awarded Postlethwaite Research Prize, May 1992).

A PROPOSED STRATEGY TO PREVENT GROUNDWATER CONTAMINATION IN KANSAS (University of
Kansas 1986) (with G. Coggins) (report prepared under contract to the Kansas
Department of Health and Environment).

Book Chapters

Introduction in ENCYCLOPEDIA OF ENVIRONMENTAL LAW: ENVIRONMENTAL DECISION MAKING
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Hazardous Waste Sites: New Opportunities for Local Control Under Superfund, 10 ZONING AND PLANNING LAW REPORT 137 (July-August 1987), *reprinted in* 1988 ZONING AND PLANNING LAW HANDBOOK 423 (with A. Dan Tarlock).

Congressional Testimony

Testimony before the House Energy and Commerce Committee's Subcommittees on Commerce, Manufacturing and Trade, and on Energy and Power, at a hearing on "EPA's Proposed Ozone Rule: Potential Impacts on Manufacturing" (June 16, 2015), <http://energycommerce.house.gov/hearing/epa%E2%80%99s-proposed-ozone-rule-potential-impacts-manufacturing>, and <http://docs.house.gov/meetings/IF/IF03/20150616/103610/HHRG-114-IF03-Bio-GlicksmanR-20150616.pdf>.

Presentation to congressional staffers, Congressional Civil Justice Caucus Academy Briefing on "Emerging Issues under the Clean Air Act Section 111(d): Cooperative Federalism or Coercive Overreach?" (Jan. 16, 2015).

Testimony before the House Judiciary Committee's Subcommittee on Regulatory Reform, Commercial, and Antitrust Law, at a hearing on "The Obama Administration's Regulatory War on Jobs, the Economy, and America's Global Competitiveness" (Feb. 28, 2013).

Testimony before the House Judiciary Committee's Subcommittee on Courts, Commercial and Administrative Law on "Raising the Agency's Grades — Protecting the Economy, Assuring Regulatory Quality and Improving Assessments of Regulatory Need" (March 29, 2011).

Speeches and Presentations

"The Effect of Technological Innovation on Environmental Enforcement and Compliance," presentation at "The Data Ecosystem: Bringing Environmental Law into the Digital Age," University of California-Berkeley (Apr. 1, 2016).

"A Misguided Mission: Wrong-headed Regulatory Reform," presentation at conference on "The Second Hoover Commission Anniversary: Lessons for Regulatory Reform," The Hoover Institution, Washington, D.C. (March 16, 2016), <https://www.youtube.com/watch?v=KFjxExcbF5I> (video link).

Moderated panel on "Facilitating the Electricity Mix: Transmission Lines and Land Use Issues" at conference on "The Electric Mix of the Future: Environment, Economics, and Governance," GW Law School (Mar. 10, 2016).

Introduced and moderated panel on "Environmental Conventions and International Organizations" at workshop on "International Law and Wildlife Well-being: Moving from Theory to Action," GW Law School (Nov. 13, 2015).

- “*Kelo* and *Horne*: The Public Use and Just Compensation Limits on Takings,” participant in debate sponsored by the Federalist Society, GW Law School, (Oct. 7, 2015).
- “Achieving Professional and Personal Goals at GW Law,” presentation at GW Law faculty retreat, Leesburg, VA (Sept. 20, 2015).
- “The Implications of *Michigan v. EPA*,” presentation to the GW Law faculty workshop (August 5, 2015).
- “U.S. Climate Change Law and Policy,” presentation to attorneys from the Korea Legislation Research Institute, Washington, D.C. (June 3, 2015).
- “EPA’s Next Generation Compliance Plan: A Better Environmental Enforcement Mousetrap or Environmental Enforcement Snake Oil?,” presentation at semi-annual meeting of the Center for Progressive Reform, Washington, D.C. (May 19, 2015).
- “The Legality of EPA’s Clean Power Plan,” presentation at session of the 11th Annual Administrative Law & Regulatory Practice Institute of the ABA’s Section of Administrative Law and Regulatory Practice on “EPA’s Clean Power Plan: An Exercise in Statutory Interpretation,” Washington, D.C. (Apr. 30, 2015).
- “The Clean Air Act and Cooperative Federalism Fables in the Courts,” presentation at conference on “The Law and Policy of Environmental Federalism,” at GW Law School (Apr. 24, 2015).
- “An Alternative Approach to Next Gen Compliance,” presentation at Symposium on Advanced Monitoring, Remote Sensing, and Data Gathering, Analysis, and Disclosure in Compliance and Enforcement, GW Law School (Mar. 27, 2015).
- “Enforcement Approaches and Next Generation Compliance,” presentation at meeting of the Environmental Council of the States, “Building Bridges, Best Practices, Bold Solutions,” at session on “Next Gen: New Tools and Approaches Drive Compliance and Results,” Washington, D.C. (Mar. 17, 2015).
- “The Impact of Legal Adaptive Capacity on Management of Federal Lands for Climate Change,” presentation at faculty works in progress workshop at the George Washington University Law School, Washington, D.C. (Feb. 12, 2015).
- “EPA’s Proposed Regulations Under Section 111(d) of the Clean Air Act: Clean Power or Power Play?,” presentation at panel event sponsored by the Law and Economics Center at the George Mason University School of Law, Arlington, VA (Feb. 4, 2015), available at <http://vimeo.com/118824110>.

- “National Monument Designations and Withdrawals,” presentation and panel moderator at session on The Obama Administration and Natural Resources Management at semi-annual meeting of the Center for Progressive Reform, Washington, D.C. (Jan. 6, 2015).
- “Holistic Agency Enforcement,” paper presentation at the Governance Workshop at the University of Michigan Law School, Ann Arbor, MI (Nov. 10, 2014).
- “The Supreme Court, Climate Change, and the Clean Air Act: Reflections on the *UARG* Decision,” presentation at GW Law faculty workshop (July 23, 2014).
- “A General Comment on the Right of Access to Modern Energy Services,” presentation at the 12th International Union for the Conservation of Nature (IUCN) Academy of Environmental Law, Tarragona, Spain (July 3, 2014).
- Reviewer and commenter on two papers on administrative law at Young Scholars Workshop, Lewis and Clark Law School, Portland, OR (April 12, 2014).
- “Why Have the Forest Service and the Bureau of Land Management Implemented Wilderness Management Responsibilities Differently?,” presentation at conference on “The Wilderness Act at 50,” Lewis and Clark Law School, Portland, OR (April 11, 2014).
- “Introduction to Federalism and Renewable Energy,” presentation to the U.S. State Department’s International Visitor Leadership Program, “Renewable Energy in the U.S.: A Project,” Washington D.C. (Mar. 31, 2014).
- “Federal Public Lands Planning and Climate Change Adaptation: Statutory Authority and Inclination for Dominant and Multiple Use Agencies,” presentation at conference at “The Role of Planning in Federal Land Management,” GW Law School, Washington, D.C. (Mar. 13, 2014).
- “Introduction to Federalism and Renewable Energy,” presentation to the U.S. State Department’s International Visitor Leadership Program, “Renewable Energy in the U.S.: A Project,” Washington D.C. (Feb. 24, 2014).
- “Federal Responses to Sea Level Rise, Coastal Flooding, and Related Climate Change Risks,” presentation at conference on “Energy, Climate Disruption and Sea Level Rise: New Directions in Law and Policy,” at Nova Southeastern University – Shepard Broad Law Center, in Fort Lauderdale, FL (Feb. 6, 2014).
- “Agency Dysfunction: Enforcement at EPA,” presentation at Scholars Meeting of the Center for Progressive Reform, Fordham Law School, New York, NY (Jan. 4, 2014).

- “Climate Change Adaptation and Institutional Design,” presentation at “GWU-UCL Virtual Research Workshop on Urban Sustainability,” George Washington University, Washington, D.C. (November 13, 2013).
- “Regulatory Safeguards for Accountable Ecosystem Service Markets in Wetlands Development,” presentation at conference on “Waters of the United States: Adapting Law for Degradation and Drought,” University of Kansas School of Law, Lawrence, KS (Nov. 1, 2013).
- “Nontraditional Energy Transmission and Wild and Scenic Rivers,” presentation at conference on “Balancing Act & Paradigm Shift: The Role of Public Lands in America’s Energy Future,” University of Montana School of Law, Missoula, MT (April 18, 2013).
- “Averting Unsustainable Energy Development and Facilities Siting,” introduced and moderated panel at conference on “Laying the Foundation for a Sustainable Energy Future: Legal and Policy Changes, GW Law School (April 11, 2013).
- “Letting Nature Work for the Pacific Northwest: A Manual for Protecting Ecosystem Services under Existing Law,” presentation at webinar sponsored by the Center for Progressive Reform (April 3, 2013).
- “Introduction to Environmental Federalism,” presentation to the U.S. State Department’s International Visitor Leadership Program, Global Water Security Initiative: A Project for India, Washington, D.C. (April 1, 2013).
- “The Efficacy of Coercive and Cooperative Enforcement Approaches to Water Pollution Control,” presentation at workshop on “Next Generation Environmental Compliance” sponsored by EPA, GW, and Berkeley, GW Law School, Washington, D.C. (Dec. 12, 2012).
- “An Assessment of The Failures of Public Land Law Since the Adoption of FLPMA,” introduced and moderated panel at the 58th Annual Rocky Mountain Mineral Law Institute, Newport Beach, CA (July 19,2012).
- “A Comparative Analysis of US and EU Regulatory Safeguards for Ecosystem Service Markets,” presentation at workshop on “Regulatory and Institutional Frameworks for Markets for Ecosystem Services,” University of Surrey, Surrey, UK (June 7, 2012).
- “An Overview of Federalism and Environmental Law,” presentation to the International Visitor Leadership Program of the U.S. Department of State, “Unconventional Gas Technical Engagement: A Project for Columbia,” Center for Global Connections, Washington, D.C. (April 23, 2012).

- “Adapting Laws to Facilitate Better Private Sector Adaptation to Climate Change,” panel moderator at day-long workshop, University of North Carolina School of Law, Chapel Hill, NC (Mar. 30, 2012).
- “Anti-Degradation Policy and the Clean Water Act: A Natural Resource Management Analogy,” organizer and presenter at conference on “The Clean Water Act at 40,” The George Washington University Law School, Washington, D.C. (Mar. 22-23, 2012).
- “Federalism, Government Reorganization, and Climate Change Adaptation,” presentation at the Searle Center Conference on “Federalism and Energy in the United States,” Northwestern University School of Law, Chicago, IL (Mar. 2, 2012).
- “Regulatory Stress, Government Realignment, and Climate Change Adaptation,” presentation at Works in Progress workshop for GW Law faculty, Washington, D.C. (Feb. 29, 2012).
- “Federalism, Climate Change Adaptation, and Government Realignment,” presentation at conference on “Reclaiming Environmental Federalism,” Washington & Lee School of Law, Lexington, VA (Feb. 17, 2012).
- “A Multi-Dimensional Framework for Reallocating Government Authority in Response to Regulatory Stress: Managing Climate Change Adaptation,” presentation at Faculty Works in Progress series at University of Notre Dame Law School, South Bend, IN (Feb. 3, 2012).
- “The ESA Implementation Tipping Point: Climate Change and Listing, Consultation, and the Takings Prohibition,” presentation at AALS Annual Meeting Hot Topic Panel, Washington, D.C. (January 6, 2012).
- Moderator of panel presentations on The George Washington Law Review’s Annual Scholars’ Review of Administrative law, at the 2011 Administrative Law Conference sponsored by GW and the ABA Section of Administrative Law and Regulatory Practice, Washington D.C. (Nov. 17, 2011).
- Debate on “Environmental Regulation and the Administrative State,” sponsored by the GWU Chapter of the Federalist Society, Washington, D.C. (Nov. 2, 2011).
- Moderator of panel presentations on “Why Accountability Mechanisms Matter: Pressing for Change,” at conference on “A Time for Action: Accountability in the Chesapeake,” University of Maryland School of Law, Baltimore, MD (Oct. 21, 2011).
- “Nondegradation Law in the United States: Can a Non-Rights-Based Doctrine Acquire Rights-Based Legitimacy?”, paper presentation at Conference on the Nonregression Principle, University of Limoges, Limoges, France (Sept. 22, 2011).

- “Natural Gas Extraction and Production Air Issues,” participant in two-day roundtable conference sponsored by the Clean Air Act Council, Philadelphia, PA (August 3-4, 2011).
- “An Overview of Natural Resource Management and Environmental Law and Policy: The Laws and the Governments that Implement Them,” keynote presentation to International Visitors Program of the U.S. Department of State, in connection with the Phelps Stokes Fund, GW Law School (July 12, 2011).
- “Toward a Well Adapted Future: A Legal Framework and Action Agenda for Climate Change Adaptation in the Puget Sound,” speaker for Webinar sponsored by the Center for Progressive Reform” (May 17, 2011).
- “A Clean Air Act Primer,” presentation at “A Primer on Impending EPA Regulations Affecting the Power Sector,” Energy Bar Association Annual Meeting, Washington, D.C. (May 4, 2011).
- “Solar Power Development on Federal Lands: Balancing Energy, Environmental, and Climate Concerns under a Multiple Use Management Framework,” presentation at “Advancing a Clean Energy Future,” University of San Diego School of Law’s Third Annual Climate & Energy Law Symposium, San Diego, CA (Apr. 15, 2011).
- Speaker and workshop participant on “Institutional Design and Climate Change Adaptation: The Centralization, Overlap, and Coordination Axes,” at “Research Roundtable — Climate Change, Adaptation, and Environmental Law,” Northwestern University Law School. Searle Center, Chicago, IL (Apr. 7-8, 2011).
- “Science, Politics, and Ethics in Regulation,” presentation at conference on “Science and Regulation: Examining the Role of Scientific Evidence in the Regulatory Process,” American University Washington College of Law, Washington, D.C. (Apr. 6, 2011).
- “Federalism Implications of Climate Change Adaptation,” presentation to the faculty at Widener University School of Law Distinguished Speaker Series, Wilmington, DE (Mar. 16, 2011).
- “Executive Power: Taking Care of the Unitary Executive,” presentation to constitutional law class at Widener University School of Law, Wilmington, DE (Mar. 16, 2011)
- “Solar Projects on BLM Lands: Balancing Energy and Climate Concerns with Multiple Use Management Mandates,” presentation at “Law and Sustainability Symposium: The Energy-Land Use Nexus,” Florida State University, Tallahassee, FL (Feb. 25, 2011).

“Climate Change Adaptation, Adaptive Management, and International Law,” guest lecture by video stream to class on “International Law, Agricultural Development, and Environmental Protection,” at the University of Kansas School of Law (Feb. 16, 2011).

“Reducing Pollution of the Chesapeake: EPA’s Watershed Implementation Plan Process,” presentation at GW Environmental Law Association panel discussion on local water quality issues, GW Law School, Washington, D.C. (Feb. 9, 2011).

“EPA and the Courts in the Early 21st Century: Judicial Treatment of Justiciability Issues,” presentation at “The EPA at 40: Assessing Its Past and Future,” Duke University Law School, Durham, NC (Jan. 24, 2011).

Moderator of panel discussion on Adaptation in Puget Sound, at conference on “Toward a Well Adapted Future in Puget Sound: A Symposium on Climate Change Adaptation and the Law,” Seattle University School of Law, Seattle, WA (Jan. 21, 2011).

Moderator of panel discussion on “Climate Change Adaptation: The Road Ahead,” at semi-annual meeting of the Center for Progressive Reform, San Francisco, CA (January 7, 2011).

Moderator of panel discussion on “Legal Issues and the Gulf Oil Spill,” at celebration of the 40th anniversary of the GW Law Environmental Program, Washington, D.C. (Nov. 6, 2010).

“Institutional Design and Allocation of Authority to Address Climate Change Adaptation,” presenter at workshop I convened at GW Law School for law professor members of the Center for Progressive Reform on Climate Change Adaptation (Nov. 5, 2010).

“EPA’s Regulation of Greenhouse Gases,” presentation at “Climate Law 101: The Exiting Regulatory Framework,” GreenGov Symposium, George Washington University Law School, Washington, D.C. (Oct. 6, 2010).

“The Supreme Court’s 2010-2011 Term and Environmental Law,” panelist, Environmental Law Institute’s Annual Supreme Court Preview, Washington, D.C. (September 28, 2010).

Moderator, debate on “Free Market Environmentalism vs. Progressive Government,” George Mason University Law School, Arlington, VA (September 28, 2010).

Moderator, discussion on *The People’s Agents and the Battle to Protect the American Public*, at University of Maryland School of Law, Baltimore, MD (September 23, 2010).

“Categorical Exclusions under NEPA and the Gulf Oil Spill,” presenter and panelist at “Brown Bag Lunch Series on Regulatory Compliance,” ABA Section of Administrative Law & Regulatory Practice, Regulatory Policy Committee, Washington, D.C. (June 28, 2010).

“Climate Change Adaptation on the Federal Lands,” presentation at 2010 Martz Summer Conference on “The Past, Present and Future of Our Public Lands,” Natural Resources Law Center, University of Colorado Law School, Boulder, CO (June 4, 2010).

“Climate Change Adaptation: A Collective Action Perspective on Federalism Considerations,” presentation at conference on “The Clean Air Act at a Crossroads: Turning 40, Confronting Climate Change,” Lewis & Clark Law School, Portland OR (April 22, 2010).

“Silo Precedents in Administrative Law,” Works in Progress presentation to the faculty, George Washington University Law School, Washington, D.C. (March 12, 2010).

Presenter and panelist on “New and Emerging Constitutional Theories and the Future of Environmental Protection,” at conference on “Environmental Protection in the Balance: Citizens, Courts, & the Constitution,” sponsored by Georgetown Law, Berkeley Law, and the Environmental Law Institute, Georgetown University Law Center, Washington, D.C. (Feb. 26, 2010).

Panel moderator, “Renewable Energy Siting Roundtable,” at conference on “Next Generation Energy and the Law,” The George Washington University Law School, Washington, D.C. (Feb. 18, 2009).

Moderator, debate on “Let 50 Flowers Bloom: Why Federalism is Good for the Environment,” The George Washington University Law School, Washington, D.C. (February 2, 2010).

“Protecting State and Local Authority Against Preemption: The Patchwork Argument and Climate Change,” presentation at “State Summit on Climate Change and Preemption,” hosted by the National Association of Clean Air Agencies, the Center for Progressive Reform, the University of Maryland School of Law, and The Washington College of Law at American University, Washington D.C. (March 25, 2009).

“Science, Politics, Law, and the Clean Water Act: The Path from Blueprint to Reality,” presentation at Washington University Journal of Law and Policy Symposium on “New Directions in Environmental Law,” St. Louis, MO (Mar. 20, 2009).

“Preserving Environmental Principal and Ecological Integrity: A Natural Resource Trust for the Multiple Use Lands,” presentation to the faculty at the George Washington University Law School, Washington, D.C. (February 5, 2009).

“Access to Courts: Remedial Preemption and Collective Action,” presentation at Case Western Reserve University School of Law, Law Review Symposium on “Access to the Courts in the Roberts Era,” Cleveland, OH (Jan. 30, 2009).

- “Access and Remedies: *Summers* and the Supreme Court’s 2008-2009 Environmental Term,” Presenter and panel member at meeting of the Center for Progressive Reform, San Diego CA (January 6, 2009).
- “Global Climate Change: Its Causes and Effects (Near and Wide) on Our Environmental and Energy Future,” Lawrence Sustainability Advisory Board’s Lawrence Home Energy Conservation Fair, Lawrence, KS (October 18, 2008).
- “Climate Change Causes, Consequences, and Policies: The Science and the Law, ” presentation at EPA-funded conference on “Climate Change, Myth or Reality,” University of Missouri-Kansas City School of Education, Global and Multicultural Education Center, Kansas City, MO (June 2, 2008).
- “Climate Change in the Courts,” presentation at a CLE program on Recent Developments in the Law, Lawrence, KS (May 29, 2008).
- “The Holcomb Power Plant Imbroglia: Using Statutory Endangerment Provisions to Combat Climate Change,” presentation to University of Kansas School of Law faculty, Lawrence, KS (April 25, 2008).
- “Coal, Electric Power, and the Environment: Climate Change comes to Kansas,” presentation to the University of Kansas School of Law Environmental Law Society, Lawrence, KS (April 17, 2008).
- “The Influence of Facility Characteristics on Environmental Performance Following Government Interventions Under the Clean Water Act,” presentation at Boston College Law School Environmental Affairs Law Review Fall Symposium: The Greening of the Corporation, Boston, MA (Oct. 25, 2007) (with D. Earnhart).
- “The Failure of U.S. Climate Change Policy,” “A Familiar Litany: Industry and Political Opposition to Climate Change Action,” and “A Summary of the Consequences of Global Climate Change,” presentations at Facts, Ideas, and U.S. Climate Change Policy: A Conference on Climate Change, University of Kansas School of Law, Lawrence, KS (Oct. 19-20, 2007).
- “The Impact of Environmental Law on Rural Legal Practice: Dealing with Bogs and Bugs,” CLE presentation at KBA -Kansas Farm Bureau program on Agricultural Law Update, Manhattan, KS (Sept. 21, 2007).
- “The Roadless Rule and Other Strategies for Protecting Public Lands,” presentation at the Natural Resources Law Center 25th Anniversary Conference and the Natural Resources Law Teachers 14th Biennial Institute: The Future of Natural Resources Law and Policy, Boulder (June 7, 2007).

- “Recent Developments in Environmental Law: The Supreme Court Weighs In,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 1, 2007).
- “Important Environmental Law Developments, 2007,” KBA Annual Survey of the Law, Topeka, KS (May 2, 2007).
- “The Impact of Global Climate Change on Hurricanes and Flood Risks,” presentation to the University of Kansas School of Law Environmental Law Society, Lawrence, KS (April 19, 2007).
- “Preemption and the Purposes of Federal Environmental Regulation,” presentation at conference on “Ordering State-Federal Relations through the Preemption Doctrine,” held at the Northwestern University School of Law, Chicago, IL (April 5, 2007) (with R. Levy).
- “Negative Preemption and the Purposes of Federal Environmental Regulation,” presentation at Faculty Research Workshop at the University of Kansas School of Law, Lawrence, KS (with Richard Levy) (March 6, 2007).
- “U.S. Water Quality Law Overview,” presentation for Asian Groundwater Experts Program, Lawrence, KS (November 28, 2006).
- “Nothing is Real: Federal Preemption by Inaction,” presentation at a conference on “Federalism in the Overlapping Territory,” held at Duke University Law School in Durham, North Carolina (November 10-11, 2006).
- “Coercive v. Cooperative Environmental Enforcement under the Clean Water Act: A Study of the Chemical Industry,” presentation at the 4th IUCN Academy of Environmental Law Colloquium: Toward More Effective Implementation of Environmental Law, Enforcement and Compliance, held at the New York State Judicial Institute at Pace University School of Law in White Plains, NY (October 16, 2006).
- “Will Global Warming Aggravate the Risk of Damage from Hurricanes and Coastal Flooding?,” presentation at faculty research workshop at Emory University School of Law, in Atlanta, GA (September 13, 2006).
- “Will Global Warming Aggravate the Risk of Damage from Hurricanes and Coastal Flooding?,” presentation at University of Kansas School of Law Legal Research Workshop,, in Lawrence, KS (September 8, 2006).
- “Global Climate Change, Hurricanes, and Coastal Flooding: Is There a Link?,” presentation at Loyola University New Orleans College of Law, for conference on Katrina Consequences: What Has the Government Learned?, in New Orleans, LA (August 25, 2006).

- “The Perversion of Cooperative Environmental Federalism,” presentation at Wake Forest University School of Law Symposium on Modern Federalism Issues and American Business, in Winston-Salem, NC (April 7, 2006).
- “Bridging Data Gaps through Modeling and Evaluation of Surrogates: Use of the Best Available Science to Protect Biological Diversity Under the National Forest Management Act,” presentation at the University of Indiana (Bloomington) School of Law, for conference on Missing Information: Environmental Data Gaps in Conservation and Chemical Regulation, in Bloomington, IN (March 24, 2006).
- “The Jurisprudence of William Rehnquist on Environmental, Natural Resources, and Takings Law,” presentation at Georgetown University Law Center, in Washington, D.C. (November 7, 2005).
- “Using Eminent Domain to Promote Economic Development After *Kelo*,” testimony before the Joint Committee on Economic Development of the Kansas Legislature, in Topeka, KS (October 11, 2005).
- “Using Back-End Adjustments to Improve Risk Regulation,” presentation at Albany Law School in Albany, N.Y. (April 21, 2005).
- “Environmental Justice at EPA,” presentation at forum on “Social Justice and Environmental Law” at the University of Kansas School of Law in Lawrence, KS (April 18, 2005)
- “Ducking the Latest Blow to the Availability of Suits to Challenge Agency Inaction,” presentation at conference sponsored by the University of Florida College of Law, “Alternative Grounds: Defending the Environment in an Unwelcome Judicial Climate,” in Clearwater, FL (November 12, 2004)
- “Do Government Interventions Induce Better Environmental Behavior? It May Depend on the Regulator’s Approach,” presentation at the University of Kansas to EPA and KDHE, in Lawrence, KS, as part of the Policy Research Institute and Hall Center for the Humanities Seminar Series, titled “Environmental Behavior: Why People Do What They Do” (April 29, 2004)
- “Moving in Opposite Directions: Roadless Area Management Under the Clinton and Bush Administrations,” presentation at Lewis & Clark Law School for symposium sponsored by the National Association of Environmental Law Societies, Public Lands Management at the Crossroads: Balancing Interests in the Twenty-First Century, in Portland, OR (March 26, 2004)
- “Judicial Review of EPA Statutory Interpretations in the Wake of *Chevron*,” presentation at Villanova University School of Law for symposium, Twenty Years After: The Impact of

the Chevron Decision Upon the Development of Federal Environmental Law, in Villanova, PA, (March 13, 2004)

“Waivers, Exceptions, and Adjustments: Perfecting Regulation on the Back End,” presentation at symposium on Reforming Environmental Law: Can Regulation Be More Adaptive?, Lawrence, Kansas (March 4, 2004)

“Shaping Corporate Environmental Behavior: The Impact of Civil Enforcement,” presentation at Albany Law School, Albany, N.Y. (November 18, 2003)

“Snowmobiles in Yellowstone: Motorized Recreational Vehicle Use on the Federal Lands,” presentation at Forum on Personal Watercraft, Snowmobiles, and ATVs – Personal Use v. Environmental Impacts, Albany Law School, Albany, N.Y. (November 18, 2003)

“Recent Developments in Environmental Law: Legislative, Regulatory, and Judicial Highlights,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 6, 2003)

“Citizen Suits Against the Federal Government,” speech at conference on Environmental Citizen Suits at Thirtysomething: A Celebration & Summit, at Widener University School of Law in Wilmington, DE (April 4, 2003)

“Law School Casebooks as Teaching and Scholarship Tools,” presentation to University of Kansas School of Law Legal Theory Workshop, in Lawrence, Kansas (February 25, 2003)

“Recent Developments in Environmental Law: Legislative and Judicial Highlights,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 7, 2002)

“The Limits of Federal Control over Wetlands and Environmental Protection Efforts,” presentation to the Annual Meeting of the Society for Risk Analysis, in Seattle, WA (December 3, 2001) (by fax).

“EPA, the Courts, and Science,” speech at conference on EPA at Thirty, Evaluating and Improving the Environmental Protection Agency, at Duke Law School in Durham, N.C. (December 7, 2000).

“Instrument Choice and Incrementalism in Environmental Policymaking,” presentation to the University of Kansas Environmental Policy Colloquium, in Lawrence, Kansas (October 16, 2000).

“NEPA Legal Issues: Reducing Your Vulnerability to Litigation,” speech and workshop presentation to the 25th Annual Conference of the National Association of Environmental Professionals, in Portland, Maine (June 29, 2000).

- “Recent Developments in Environmental Law: Judicial, Legislative, and Administrative Highlights,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 2, 2000).
- “Back to the Future: Rescuing Environmental, Health, and Safety Standards from the Economic Paradigm,” presentation (with S. Shapiro) at Chicago-Kent College of Law’s Program in Environmental and Energy Law: New Directions in Environmental Governance, in Chicago, Illinois (January 28, 2000).
- “NEPA Legal Issues: Reducing Your Vulnerability to Litigation,” speech and workshop presentation to the 24th Annual Conference of the National Association of Environmental Professionals, in Kansas City, Missouri (June 24, 1999).
- “Recent Developments in Environmental Law: Judicial Highlights,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 4, 1999).
- “Land Exchanges and Access Issues in the Colorado River Basin and Beyond,” speech to Tenth Institute for Natural Resources Law Teachers sponsored by Rocky Mountain Mineral Law Foundation, et al., Las Vegas, Nevada (May 13, 1999).
- “Environmental Law and the Practicing Scientist,” presentation to Junior/Senior Seminar on Chemistry, Lawrence, Kansas (March 30, 1999).
- “Categorizing Risk Regulation,” workshop at Washington University School of Law, St. Louis, Mo. (November 20, 1998).
- “Recent Developments in Environmental Law: Judicial Highlights,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 5, 1998).
- “Aspirational Pragmatism and the Fate of Risk Regulation,” presentation at Nature and Culture Colloquium of faculty and graduate students, Lawrence, Kansas (October 31, 1997).
- “Standing in the Shadows: Standing to Sue in Environmental and Public Natural Resources Law Cases,” speech at a CLE program sponsored by the Kansas City Metropolitan Bar Association and the KCMBA Environmental Law Committee, in Kansas City, Mo. (October 14, 1997).
- “Recent Developments in Environmental Law: Legislative and Judicial Highlights,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 7, 1997).
- “Fear and Loathing on the Federal Lands,” inaugural lecture for the Robert W. Wagstaff Distinguished Professorship, in Lawrence, Kansas (March 3, 1997).

“Criminal Culpability and Environmental Law” and “Criminal Prosecution of Environmental Offenses (Point/Counterpoint),” two presentations and moderator of day-long seminar on “Avoiding Environmental Liability: A Corporate and Personal Challenge,” in Wichita, Kansas (October 23, 1996).

“Recent Developments in Environmental Law: A Grab Bag of Legislative and Judicial Developments,” speech at a CLE program on Recent Developments in the Law, in Lawrence, Kansas (June 7, 1996).

“Criminal Culpability and Environmental Law,” presentation and moderator of day-long seminar on “Avoiding Environmental Liability: A Corporate and Personal Challenge,” in Kansas City, Missouri (March 20, 1996).

"The Impact of Federal Environmental Protection Laws on Water Allocation," speech to the annual Institute on Planning, Zoning, and Eminent Domain presented by the Municipal Legal Studies Center of the Southwest Legal Foundation in Dallas, Texas (November 15, 1995).

"An Introduction to Risk Assessment," speech and moderator of day-long seminar on "Risk Assessment for Site Contamination and Cleanup," in Overland Park, Kansas (April 21, 1995).

"Technical Issues in Air Permitting," Seminar Moderator, Overland Park, Kansas (November 4, 1994).

"Sharing Water: Cities, Farms, and Ecosystems," Local Panelist for National Video-Conference, Lawrence, Kansas (October 14, 1994).

"Legal and Judicial Systems and Environmental Policies," presentation to seminar in Environmental Policy, Environmental Studies Program, University of Kansas, Lawrence, Kansas (September 9, 1992).

"EPA and the Courts," speech at Symposium sponsored by Duke University School of Law and Washington University School of Law on Assessing the Environmental Protection Agency After Twenty Years: Law, Politics, and Economics, Durham, North Carolina (November 15, 1990).

"Introduction to Federal Regulation of Hazardous Waste Management," speech at and moderator of University of Kansas Continuing Legal Education Conference on the Law of Hazardous Waste Management, Lawrence, Kansas (July 15, 1988).

"Federal Groundwater Quality Control Law and Policy," speech at the Ninth Annual Summer Program of The University of Colorado Natural Resources Law Center, on Water Quality

- Control: Integrating Beneficial Use and Environmental Protection, Boulder, Colorado (June 2, 1988).
- "The Quiet Revolution in Administrative Law," seminar presentation to the University of Miami School of Law faculty, Miami, Florida (April 1988).
- "Congress, the Supreme Court, and the Quiet Revolution in Administrative Law," seminar presentation (with S. Shapiro) to the Duke University School of Law faculty, Raleigh, North Carolina (February 1988).
- "Introduction to Federal Regulation of Hazardous Waste Management," speech and moderator of University of Kansas Continuing Education Seminar on Environmental Law for Hazardous Waste Handlers and Generators, Overland Park, Kansas (December 17, 1987).
- "Low Level Radioactive Waste Disposal: We'll Take This Stuff if We Have To, But...", speech to American Chemical Society Annual Meeting, New Orleans, Louisiana (September 3, 1987).
- "Groundwater Quality Protection in Kansas: A Review of Existing State Policies and Programs," speech to the Conservation Forum, Salina, Kansas (October 10, 1987).
- "The Fight for Superfund Reauthorization," presentation to the University of Kansas Environmental Law Society, Lawrence, Kansas (October 1986).
- "Legislative Approaches to the Prevention of Groundwater Contamination in Kansas," speech to university of Kansas undergraduate seminar in Topics in Contemporary Chemistry, Lawrence, Kansas (April 7, 1986).
- "Interstate Compacts for Low-Level Radioactive Waste Disposal: Are the Ramparts Against Out-of-State Waste Defensible," speech to American Chemical Society, Division of Chemistry and Law, Chicago, Illinois (September 10, 1985).
- "Legal Aspects of Water Quality," speech to Kansas high school debaters sponsored by the Division of Continuing Education and the Department of Speech of Kansas State University, Lawrence, Kansas (by teleconference statewide) (September 17, 1985).
- "The Wolf Creek Nuclear Plant and Excess Capacity," speech and moderator of panel discussion as part of symposium sponsored by the Kansas Law Review, Lawrence, Kansas (February 2, 1985).
- "Chemical Waste Disposal and the Superfund," presentation to University of Kansas seminar for Humanities 510: Science, Technology, and Society, Lawrence, Kansas (November 1984).

"Acid Rain: The Choice is Ours," presentation as part of panel discussion sponsored by the Jayhawk Audubon Society, Lawrence, Kansas (April 19, 1984).

"Acid Rain: Requiem or Recovery?", presentation and panelist at meeting sponsored by Sierra Club, Lawrence, Kansas (November 16, 1983).

"The Status of Nuclear Waste Disposal," speech sponsored by the University of Kansas Energy Research Center, Lawrence, Kansas (April 1, 1983).

Law School Service

Academic Committee, 1982-83, 1995-96, 1996-97 (Chair), 1997-98 (Chair), 1998-99 (Chair), 1999-2000 (Chair), 2001-02, 2007-08

Ad Hoc Faculty Appointments Policy and Procedure, Spring 2008, 2008-09

Ad Hoc Grievance Procedure Review Committee, 1999-2000, 2000-01

Admissions Committee, 1985-86, 2001-02

Awards and Special Events Committee, 1984-85, 1990-91

Chaired Professors Committee, 1996-present

Curricular Innovation Committee, 2006-07, 2007-08, 2008-09

Energy Law Working Group (Chair), 2012-2013

Faculty Appointments/Recruitment Committee

KU: 1991-92, 1992-93, 1997-98, 2000-01 (Acting Chair, spring 2001), 2002-03 (Co-Chair), 2003-04 (Co-Chair), 2007-08, 2008-09 (Chair)

GW: 2013-114, 2014-15

Intellectual Life Committee (GW), 2011-12, 2015-2016

Law Review Co-Advisor, 2001-02

Library Committee, 1983-84, 1989-90

Placement Committee, 1994-95

Research Committee, 1986-87 (Chair), 1987 (Fall), 1988-91, 1991-92 (Chair), 1992 (Fall), 1995-96; 1996-97

Search Committee, Koch Distinguished Professor of Law and Business, 1991-93

Search Committee, Faculty Research Law Librarian, 2000-01

Self-Study Committee, 1984-85, 2004-06 (Chair)

Teaching Committee (GW), 2009-10

Tenure and Promotion and Committee

KU: 1986-87, 1992-93, 1998-99, 1999-2000, 2004-05, 2004-05

GW: 2010-11, 2011-12, 2012-2013 (Chair), 2015-2016

Chair, University of Kansas Law Faculty Association, 1984-85

Co-coordinator, Second Year Moot Court Competition, 1983-86

Faculty Representative to Association of American Law Schools, 1984-85 (including delegate at AALS Annual Meeting in Washington, D.C., January 1985)

Faculty Co-Advisor, Environmental Law Society, 1984-88, 1990-91, 1995-2009

Supervisor, student Independent Research papers (approximately 2 each semester), 1982-present

Faculty Reader, student Law Review Notes involving environmental law issues, 1982-present

University Service

Ad Hoc Committee on an Environmental Institute, 1996-97

Biohazards Committee, 1984-87

Chemical Hygiene Subcommittee, Laboratory Safety Committee, 1995-2003

Dean Search Committee, 1998-99

Faculty Advisory Council, University of Kansas Center for Environmental Education and Training, 1994-96

Policy Committee, Kansas Water Resources Research Institute, 1982-87

Member, Executive Board, University of Kansas Chapter, American Association of University Professors, 1985-87

Supervised two week unit of Humanities 510: Science, Technology, and Society, concerning "Chemical Waste Disposal and the Superfund" (including 90-minute lecture during the first week and participant in 90-minute panel discussion the second week) (October 9 and 16, 1984)

Member of coordinating faculty for Humanities 510: Science, Technology, and Society (Spring 1989)

Dean Davis' Review Committee, 1984-85

First Level Review Committee, General Research Fund, 1987

Community and Professional Service

Advised the Secretariat of the Commission for Environmental Cooperation established by the North American Agreement on Environmental Cooperation on issues pertaining to domestic and international environmental law, 1999-2001)

Advised the United States Senate Committee on Environment and Public Works and the United States Department of Justice on proposed amendments to the Clean Water Act, June-July 1994

Member, Board of Directors, Center for Progressive Reform (January 2008 to present)

Working Group Leader and Member Scholar, Center for Progressive Regulation, 2002-present

Member, Committee on Education, Outreach and Policy of the City of Lawrence's Climate Protection Task Force (beginning June 2008)

Commenter for American Bar Association's Central and East European Law Initiative on draft Bulgarian Waste Law, April 1993

Member, Lawrence Board of Zoning Appeals, 1983-87

Member, National Asbestos Conference Steering Committee; attended two-day planning session in Kansas City, Missouri (March 17-18, 1985)

Reporter for Kansas Bar Association's "Real Estate, Probate and Trust Law Section Newsletter" (responsible for analyzing and providing written summaries approximately three times a year of significant new Kansas court decisions concerning real property law), 1983-88

Member, Executive Committee, and Issue Leader for Clean Air, Clean Water, and Hazardous Waste Issues, Wakarusa Group, Kansas Chapter, Sierra Club, 1983-87

Member, Board of Directors, Kansas Natural Resources Council, 1987-88

Conservatives Flip-Flopped on Cap-and-Trade, The Wichita Eagle, June 30, 2008 (op-ed)

Love that Dirty Water? A Status Report on the Courts and the Environment (with D. Gottlieb) (report prepared for the Alliance for Justice) (March 2000)

Committee Reports, Environmental Group: Superfund and Hazardous Waste, in ABA SECTION ON NATURAL RESOURCES, ENERGY, AND ENVIRONMENTAL LAW 1998: THE YEAR IN REVIEW (1999) (contributing author; Marla E. Mansfield, ed.)

Committee Reports, Environmental Group: Superfund and Hazardous Waste, in ABA SECTION ON NATURAL RESOURCES, ENERGY, AND ENVIRONMENTAL LAW 1997: THE YEAR IN REVIEW (1998) (contributing author; Marla E. Mansfield, ed.)

EPA Case, Others Limit Federal Regulatory Authority, The Kansas City Star, June 1, 1999, at B6 (with K. Brooks) (op-ed)

Outline Presentation, "RCRA and Clean Air Act Developments," National Law Journal Sixth Annual General Counsel Conference (New York City June 13-14, 1994) (with M. Rodburg)

Outline Presentation, "De Minimis Settlements — How to Make Them Work," Information Network for Superfund Settlements (Washington, D.C. Oct. 5, 1993) (with M. Rodburg)

Article, "Legal Framework of Direct Investments and Acquisitions in the United States by Foreign Companies," Union Internationale des Avocats: Etudes et Documents 9 (1981) (reprinted in August 31, 1981 issue of the New York Law Journal) (with A. Newberg and J. E. Marans)

Article, "Judicial Developments Affecting DOE Enforcement Actions," Oil and Gas Regulation Analyst, March 1981, at 5

Article, "Department of Energy's OHA Shows Ability in Crisis," Legal Times of Washington, April 28, 1980, at 5 (with S. Schotland)

Article, "Are Citizen Suits An Industry Burden?," 62 Miami Rev. No. 195, at 14 (March 21, 1988)

Article, "Making the Most of Law School: Preparing for a Career in Environmental Law," The NAELS Reporter (Fall 2000) (the newsletter of the National Association of Environmental Law Societies)

Article, "Clean Air, Dirty Cars: America's Love Affair With the Automobile," 2 Univ. of Miami Environmental Law Society Bulletin No. 2, at 1 (Spring 1988)

Participant, Public Law Workshop, "How Can Regulators and Administrators Determine the Public Interest?", Lawrence, Kansas (May 4, 1984)

Participant, Economic Seminar for KU Faculty, Lawrence, Kansas (May 16-26, 1983)

Member, American Bar Association, 1977-present

Member, District of Columbia Bar, 1977-present

Member, Kansas Bar Association, 1990-present