1983

Wetlands Preservation, Fish and Wildlife Protection, and 404 Regulation: A Response

Michael C. Blumm

Follow this and additional works at: https://scholarship.law.uwyo.edu/land_water

Recommended Citation
Available at: https://scholarship.law.uwyo.edu/land_water/vol18/iss2/1

This Article is brought to you for free and open access by Law Archive of Wyoming Scholarship. It has been accepted for inclusion in Land & Water Law Review by an authorized editor of Law Archive of Wyoming Scholarship.
Responding to an earlier Land and Water Law Review article, Professor Blumm defends the permit program established by section 404 of the Clean Water Act against charges of bureaucratic red tape and over-regulation. He contends that the value of wetlands and fish and wildlife warrant a broad 404 jurisdictional mandate and a pluralistic review process designed to assure that the benefits of aquatic developments exceed their costs. He argues that the existing 404 program, grounded on widespread intergovernmental and public review, has both preserved important ecosystems and produced more cost-effective developments. However, he questions the wisdom and the legality of a recent expansion in the use of general permits, and he concludes with a number of suggestions to increase the effectiveness of the program.

WETLANDS PRESERVATION, FISH AND WILDLIFE PROTECTION, AND 404 REGULATION: A RESPONSE

Michael C. Blumm*

I. INTRODUCTION

The permit program established by section 404 of the Clean Water Act has always been a poor stepchild of the environmental regulatory movement. Neither propelled by a...
health crisis like clean air or toxic and hazardous waste regulation,\(^2\) nor popularized by dramatic confrontations between snail darters and dams\(^3\) or between states' rights and multinational oil companies.\(^4\) 404 regulation has been relegated to the backwaters of environmental law.\(^5\) Deprived even of the typical regulatory acronym, the 404 program subsists with only an arithmetic moniker.

A recent article published in the Land and Water Law, however, would consign this anonymity to irrelevance. Gary Parish and Michael Morgan unfurl the tattered banner of regulatory relief\(^6\) in an attempt to convince Congress to reduce the program's jurisdiction, soften its permit standards, and "streamline" its permit processing.\(^7\)

If Congress adopts the Parish and Morgan recommendations, destruction of the nation's wetlands will accelerate.\(^8\) These critical ecosystems, two-and-a-half times more productive than the nation's most fertile hayfields,\(^9\) warrant effective regulatory protection. Wetlands supply a vital link in the

---

4. See California v. Watt, 683 F.2d 1253 (9th Cir. 1982) (Secretary of the Interior must determine that Outer Continental Shelf Lease Sale No. 53 is consistent with California's coastal zone management program to the maximum extent practicable).
6. For a perceptive critique of recent efforts to substitute marketplace reliance for environmental regulation, as well as an analytic framework to evaluate more justifiable attempts at regulatory reform by a former EPA Administrator, see Costle, Environmental Regulation and Regulatory Reform, 57 WASH. L. REV. 409 (1982).
8. The regulatory definition of wetlands emphasizes the existence of aquatic vegetation. According to the regulations of the U.S. Army Corps of Engineers, wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." 33 C.F.R. § 323.2(e) (1982).
aquatic food chain, provide essential fish and wildlife habitat, perform important pollution abatement and flood control functions, and serve as water recharge areas for aquifers.\textsuperscript{10} They are, in short, among the most valuable ecosystems on earth.

They are also disappearing rapidly. Each year more than 300,000 acres of the nation's wetlands are destroyed;\textsuperscript{11} usually they are filled for industrial, residential or recreational developments or drained for agricultural or silvicultural purposes.\textsuperscript{12} Since the economic return of these developments accrues to project proponents rather than society at large, market forces encourage wetlands destruction, even where the total economic value of undeveloped wetlands exceeds their developed value. Like clean air, wetlands are a classic collective good.\textsuperscript{13} Without government intervention,\textsuperscript{14} wetlands

\textsuperscript{10} See generally id. at 19-29.
\textsuperscript{11} Id. at 54. See also 12 COASTAL ZONE MGMT. NEWSLETTER No. 47, at 4 (quoting Congressman John Breaux as stating that wetland losses have already reached 40%), 5 (quoting Fish and Wildlife Service Director, Robert Jantzen, as estimating annual wetland losses at 300,000 to 400,000 acres) (Dec. 2, 1981). Included among the estimated 30-40% of wetlands losses are destruction of over 80% of California's wetlands, 45% of Connecticut's coastal marshes, more than 80% of the marshes in Nebraska's Rainwater Basin, and over 60% of southeastern Wisconsin wetlands. More than half of the wetlands in the prairie pothole region of the upper Great Plains had been drained by 1950, and approximately 35,000 acres continue to be destroyed each year. San Francisco Bay, an important resting and feeding area for migratory birds traveling the Pacific flyway, has lost 75% of its original wetlands. Our NATION'S WETLANDS, supra note 9, at 49-51. It should be noted that the General Accounting Office has concluded that drainage of wetlands is not necessary to meet increased food and fiber needs. U.S. COMP. GEN., BETTER UNDERSTANDING OF WETLAND BENEFITS WILL HELP WATER BANK AND OTHER FEDERAL PROGRAMS ACHIEVE WETLAND PRESERVATION OBJECTIVES, PAD-79-10, at 18, 33 (Feb. 8, 1979). This report observes that even though most wetlands destruction has taken place in the name of agriculture and flood control, wetlands preservation may provide more cost effective flood control than public works projects and may have substantial agricultural benefits as well, including erosion prevention, soil improvement, and prevention of premature retirement of lands now under cultivation. GAO REP. PAD-79-10, supra at 1, 2-3, 25-27, 30.
\textsuperscript{12} See OUR NATION'S WETLANDS, supra note 9, at 31-47. In the upper Midwest, single-crop farming with large specialized equipment that is difficult to maneuver in wet areas has encouraged draining of prairie potholes. In the Mississippi Delta, a growing international soy bean market has intensified pressure to replace wet bottomland forests with tillable soil. Id. at 33-35. For example, in the Yazoo Basin, in the 1970's alone over 60% of bottomland hardwoods were cleared, helped considerably by federal flood control projects. See 4 NAT'L WETLANDS NEWSLETTER, No. 3, at 7 (1982).
\textsuperscript{13} Collective goods produce benefits that a particular individual cannot exclude others from enjoying. Since the public at large can reap these benefits for free, it will not pay anything for the collective good, rationally choosing to take a "free ride" and creating what economists refer to as market failure. See generally R. STEWART AND J. KRIER, ENVIRONMENTAL LAW AND POLICY 107-13 (2d ed. 1978).
\textsuperscript{14} However, government \textit{regulation} is not essential to overcome the collective goods problem. Alternatives include subsidies, redefining private property rights, and penalties or taxes. See id. at 116. Subsidies to private landowners complement wetlands regulatory programs, can ensure preservation of important wetlands (which regulatory programs cannot ensure), and are sometimes necessary to prevent inequities to individual landowners. A summary of federal nonregulatory programs is provided in GAO REP. PAD-79-10, supra note 11, at 19. Redefinitions of property rights come slowly and often
development will produce undesirable social costs, what Garrett Hardin describes as “the tragedy of the commons.”\textsuperscript{15}

Section 404 of the Clean Water Act provides the principal means to avoid that tragedy by establishing a permit program to govern the discharge of dredged or fill material into the nation’s waters.\textsuperscript{16} The program enables widespread public and intergovernmental review of proposed discharges and requires permitted activities to produce net social benefits.\textsuperscript{17}

However, for a variety of reasons the 404 program has proved to be a favorite target of developers and others opposed to government regulation. First, despite its water quality, flood and pollution control, groundwater recharge, and fish and wildlife goals, many equate wetlands protection with local land use control and therefore consider it an inappropriate subject for a federal regulatory program.\textsuperscript{18} Unlike local zoning are prompted by legislative action. For example, the practical effect of the Wisconsin Supreme Court’s celebrated decision in Just v. Marinette County, 56 Wis. 2d 7, 201 N.W.2d 761 (1972), has been considerably less than its academic reputation. See Bryan, \textit{A Phantom Doctrine: The Origins and Effects of Just v. Marinette County}, 1978 AM. B. FOUND. RESEARCH J. 397 (noting that, despite the finding in \textit{Just} that a denial of a wetlands development permit did not require that compensation be paid to the landowner, wetland fill permits continue to be routinely granted in four Wisconsin and Minnesota counties). Penalties or taxes for wetlands development have not been seriously attempted.

\begin{itemize}
  \item \textsuperscript{15} Hardin, \textit{The Tragedy of the Commons}, 162 SCIENCE 1243 (1968) (private property concepts encourage resource developers and polluters to pursue projects that produce social spillover costs because project proponents are not responsible for these “external” costs).
  \item \textsuperscript{16} 33 U.S.C. \textsection\textsection 1344 (1976 & Supp. 1981). Notably, the 404 program is limited to “discharges” of dredged or fill material into navigable waters. 33 U.S.C. \textsection 1344 (1976 & Supp. 1981). Drainage of wetlands accomplished by activities outside wetlands is not regulated by the 404 program, a fact noted by the General Accounting Office. See GAO Ref. PAD-79-10, supra note 11, at 23.
  \item \textsuperscript{17} 33 U.S.C. \textsection 1344 (1976 & Supp. 1981). On the importance of intergovernmental relations to the 404 permit process, see Blumm, \textit{The Clean Water Act’s Section 404 Permit Program Enters Its Adolescence: An Institutional and Programmatic Perspective}, 8 ECOCYLOGY L.Q. 41-45 (1980) [hereinafter cited as 404 Program Perspective]. The Corps’ public interest review requires permit decisions to balance the benefits stemming from proposed activities against their reasonably foreseeable detriments. 33 C.F.R. \textsection 320.4(a)(2) (1982). See also Reconsidering 404, supra note 7, at 62-63.
  \item \textsuperscript{18} Parish and Morgan subscribe to this view, asserting 404 jurisdiction extends to areas that are “basically land,” and noting that land use regulation has been traditionally a state and local government function. See Reconsidering 404, supra note 7, at 53 n.34. However, 404 regulation applies only where there is a prevalence of aquatic vegetation—such areas are “basically land” only in the authors’ non-biological opinions. Further, while section 101(b) of the Clean Water Act recognizes the primary responsibilities of the states to control water pollution, it does so by encouraging the states to operate state 404 programs, subject to federal review and oversight. 33 U.S.C. \textsection 1251(b) (1976). Parish and Morgan also assert a lack of congressional intent to regulate wetlands, erroneously implying that the statute contains no mention of wetlands (overlooking 404(g), 33 U.S.C. \textsection 1344(g) (Supp. V 1976)) and inaccurately portraying the legislative history on wetlands as “little” (see, e.g., J. Kramer, Is There a National Interest in Wetlands: The Section 404 Experience 9 nn.92, 94 (Sept. 17-19, 1981) (paper presented at the California Riparian Systems Conference, Davis, Cal.) (on file at the Land and Water Law Review office) (citing 123 CONG. REC. S13561, S13564 (1977) (remarks of Senators Baker and Muskie)). Reconsidering 404, supra note 7, at 52-53.
\end{itemize}
decisions, however, activities subject to 404 regulation frequently have effects far removed from the local jurisdiction.\textsuperscript{19} Second, the operation of the program is dependent upon a good deal of intergovernmental coordination that takes time, and which opponents classify as red tape.\textsuperscript{20} Third, the agency responsible for issuing 404 permits, the United States Army Corps of Engineers, has been an ambivalent program administrator, often resisting its prescribed role in the intergovernmental review process.\textsuperscript{21} As a result, since 1975 Congress has continuously considered proposed changes to section 404 that would restrict its scope, expedite its permit processing, or alter program implementation responsibilities.\textsuperscript{22}

Parish and Morgan support these now familiar proposals, claiming that the 404 program has strayed from its authorized purposes and that it produces unwarranted uncertainty, costs, and delays for project developers.\textsuperscript{23} They recommend that Congress reduce the jurisdiction of the program and authorize


\textsuperscript{20} In response to a request for comments from Vice President Bush's Regulatory Relief Task Force, the American Petroleum Institute ranked the 404 program second in its "hit list" of burdensome regulatory programs. 13 COASTAL ZONE MGMT. NEWSLETTER No. 2, at 1 (Jan. 13, 1982). However, recent studies, one by the Corps itself, suggest that the interagency review process is cost effective. See infra text accompanying notes 91-93.

\textsuperscript{21} The Corps has long resented the ability of other agencies, notably the Environmental Protection Agency and federal and state fish and wildlife agencies, to invoke an administrative appeals process to resolve interagency disputes. Particularly troublesome to the Corps is a September 5, 1979, Opinion of the Attorney General concluding that EPA, not the Corps, has final say in jurisdictional questions. See Reconsidering 404, supra note 7, at 56-57. Fueled by the fires of regulatory reform, the Assistant Secretary of the Army for Civil Works, William Gianelli, has recently suggested a package of 404 "reforms," including substantial changes in the administrative appeal process that would enable the Corps to veto appeals, overturning the Attorney General's Opinion regarding EPA's authority, and drastically curtailing the geographic reach of the program. For a summary of the Gianelli proposals, see 3 NAT'L WETLANDS NEWSLETTER No. 6, at 2-4 (1982). See also 47 Fed. Reg. 1697 (Jan. 13, 1982) (Corps' reasons for revising the program, including claims that "interest groups and other Federal agencies are able to wield great influence in the granting of a permit...[creating a perceived] regulatory burden by the people of the United States...[including] cases where small enterprises and entrepreneurs have almost been driven out of business because of the time required and the mitigation demands of commenting organizations and agencies.")

\textsuperscript{22} Since the decision in NRDC v. Callaway, 392 F. Supp. 685 (D.D.C. 1975), which ordered the Corps to amend its regulations to embrace all waters of the United States (not merely traditionally navigable waters), Congress has continuously considered amendments that would restrict the geographic scope of the program. See Caplin, Is Congress Protecting Our Water? The Controversy Over Section 404, Federal Water Pollution Control Act Amendments of 1972, 31 U. MIAMI L. REV. 445 (1977); Myhrum, Federal Protection of Wetlands Through Legal Process, 7 B.C. ENVTL. AFF. L. REV. 567 (1979); and J. Kramer, supra note 18, at 1 (synopsis).

\textsuperscript{23} Reconsidering 404, supra note 7, at 46.
the Corps of Engineers to operate the program unencumbered by interagency review and oversight.24

Parish and Morgan misunderstand the purposes and goals of 404 regulation; consequently, their suggested jurisdictional limitations and program implementation reforms are flawed. This response aims to clarify these purposes and goals and to explain the need for a federal regulatory program based on intergovernmental consultation. While some legislative changes to the program are justifiable, they are not those suggested by Parish and Morgan. The goal of any such legislative amendments should be to enable the program to reduce the total social costs of wetlands development, a goal that cannot be achieved by Parish and Morgan’s suggestions for restricting section 404’s regulatory scope or creating a “super” 404 agency.

II. PURPOSES AND GOALS OF 404 REGULATION

Parish and Morgan begin by claiming that the 404 program is “unique” among environmental programs because its focus is not on public health protection.25 They also charge that the program is a regulatory “wild card,” burdening project developers with uncertainty because its permit criteria are neither grounded on “objective,” quantitative limits26 nor tied to ambient wetlands standards.27 Moreover, they assert that 404 regulation is justified only where necessary to prevent

24. Id. at 78-80. Cf. the Gianelli recommendations summarized supra, at note 21.
25. Reconsidering 404, supra note 7, at 43-44.
26. Id. at 44. Parish and Morgan’s assumption that “safe limits can be set” to protect public health reflects an extremely oversimplistic perspective of health-based regulation, overlooking the pervasive uncertainties surrounding the effects of low-level exposures. Moreover, it is inaccurate to imply that standards expressed quantitatively are “objective” standards, for they are based on highly subjective factors, such as risk assessments. See generally Page, A Generic View of Toxic Chemicals and Similar Risks, 7 ECOLOGY L.Q. 207 (1978). Parish and Morgan unsatisfactorily attempt to dismiss these realities by a simple acknowledgement that “disputes may rage.” Reconsidering 404, supra note 7, at 44.
27. Reconsidering 404, supra note 7, at 44. Establishing areawide wetland acres necessary to maintain healthy aquatic ecosystems, reduce pollutants, minimize flood risks, recharge ground water supplies, and so forth, would necessarily depend on site specific factors and would be costly, time-consuming, and fraught with biological uncertainties. See infra note 35 and accompanying text. This is not to suggest that establishing ambient wetlands standards would be undesirable. But since there are not currently any wetlands maps suitable for jurisdictional determinations (see infra text accompanying note 59), such standards would take years to develop and implement, even if biological consensus could be reached. In the interim, wetlands protection must be dependent upon a functioning permit process. However, Parish and Morgan suggest that development should proceed unregulated until wetland maps are completed. See infra note 42 and accompanying text.
interstate water pollution or to protect interstate water transportation.\(^28\)

Actually, public health protection is an important, but by no means the exclusive, goal of environmental regulation. Numerous regulatory programs are designed to reduce the social costs of natural resources development.\(^29\) Reduction of total social costs, especially costs imposed upon others without their consent (externalities),\(^30\) must be an overriding goal of the 404 program. Unless project proponents pay for the full costs of their developments, inefficiency is likely and equity impossible.\(^31\) The best way to ensure that developers internalize the costs of their projects is to identify those costs in an open, pluralistic review process.

The lack of quantified permit limitations may result in some uncertainty, but it is hardly unusual to have permit criteria that call of the exercise of discretion on the part of the permit writer.\(^32\) Arbitrary exercises of discretion are forbidden by the Administrative Procedure Act,\(^33\) and reasoned decisionmaking is encouraged by the 404 regulation requiring written factual findings.\(^34\) Moreover, reducing 404 permit criteria

\(^{28}\) Reconsidering 404, supra note 7, at 50, 52 n.29.


\(^{30}\) Social costs include abatement costs, avoidance costs, and transaction costs, in addition to health and welfare costs. For a brief explanation of externalities, see Stewart and Krieb, supra note 13, at 113-14.

\(^{31}\) Economic inefficiency will result whenever the total costs of development exceed its benefits. Inequities occur when those who bear development costs do not willingly accept these costs or are not compensated for their losses.

\(^{32}\) For example, under the National Pollution Discharge Elimination System authorized by section 402 of the Clean Water Act, permit writers develop permit conditions based on their "best engineering judgment" where there are no national effluent standards applicable to a particular discharge. See Zemiansky and Zerbe, Adjudicatory Hearings As Part of the NPDES Permit Process, 9 Ecology L.Q. 1, 38 (1980). Under section 173(2) of the Clean Air Act, new and modified sources in nonattainment areas must achieve the "lowest achievable emission rate," which essentially involves a case-by-case determination of best-available control technology. 42 U.S.C. § 7503 (Supp. IV 1980).


to a numerical formula is neither possible nor desirable because the value of both wetlands and developments may vary considerably from case to case. Although the notion of establishing ambient wetlands standards is an intriguing one, such standards would have to be set on an area-by-area basis, would require elaborate, time-consuming and costly studies, and might well be beyond the current state of knowledge of wetlands functions and benefits.35

The contention that the purposes of 404 regulation are to prevent interstate pollution and protect interstate water transportation is simply incorrect. The Clean Water Act's overriding goals are (1) to prevent all discharges of pollutants by 1985, not just those into interstate streams;36 and (2) to provide water quality that is swimmable and sufficient to provide for the protection and propagation of fish and wildlife by 1983.37 The Act is not designed to protect navigation or regulate interstate water transportation. Moreover, the text of section 404 itself indicates that fish and wildlife protection and maintenance of ecosystem diversity, productivity, and stability are fundamental 404 program goals.38 These goals help explain why the program's geographic reach extends considerably beyond the limits of traditionally navigable waters. Because Parish and Morgan do not understand the program's goals, they fail to see why cutting back its jurisdiction would undermine its effectiveness.

III. 404 JURISDICTION

Parish and Morgan liken 404 regulation to an amphibian, gradually crawling out to venture where ship's keels have

35. See Our Nation's Wetlands, supra note 9, at 54:
We have reached a point when uses of wetlands beyond those considered "productive" in the strictest sense of the word must be guarded. We have learned enough to know that we do not know enough. We cannot put a figure on how much acreage we can afford to lose because we are only beginning to understand the value of wetlands.

(emphasis in original).

See also GAO Rep. PAD-79-10, supra note 11, at 8 (noting that wetlands benefits are dependent upon site specific conditions, requiring case-by-case assessments), at 30-31 (concluding that "several years of research" would be necessary to establish a general "productivity factor" for wetlands).

never sailed.\textsuperscript{39} This expansive jurisdiction, they allege, demonstrates that the program has strayed from their conception of its statutory purpose. As a result, they recommend that Congress amend section 404 to confine its jurisdictional scope to navigable and interstate waters below their headwaters, tidal wetlands, and inland wetlands below the ordinary water mark.\textsuperscript{41} As an alternative to their preferred restriction of jurisdiction, the authors suggest identifying and mapping important wetland areas as a prerequisite to regulation.\textsuperscript{42}

The amphibian metaphor is amusing, but inaccurate. Section 404's geographic reach was established in the 1972 Federal Water Pollution Control Act Amendments and has not been materially changed since.\textsuperscript{43} The only reason the program's reach appears to have expanded is that the Corps refused to revise its definition of navigable waters to conform to the 1972 Act until the court ordered the agency to do so.\textsuperscript{44} As a result of that order, the Corps devised a "phasing" scheme by which it would gradually meet the jurisdictional mandate of the Act in three increments over the course of two years.\textsuperscript{45} Thus, the 404 program's failure to assume its mandated geographical reach until nearly five years after the 1972 amendments must be blamed on the Corps' recalcitrance, not, as Parish and Morgan imply, on administrative overreaching.\textsuperscript{46}

\textsuperscript{39} Reconsidering 404, supra note 7, at 45.
\textsuperscript{40} "Headwaters" is a term of art in the Corps' regulations, meaning the point in a non-tidal stream above which the average annual flow is less than 5 cubic feet per second (cfs). 33 C.F.R. § 323.2(i) (1982). On streams that are dry part of the year, Corps District Engineers may establish the headwater point as that point where a flow of 5 cfs is exceeded 50\% of the time. 33 C.F.R. § 323.2(i) n.3 (1982).
\textsuperscript{41} Reconsidering 404, supra note 7, at 79. This suggestion resembles the Gianelli proposal (see supra note 21) that would confine the program's jurisdiction to "inundated lands," eliminating approximately 85\% of the nation's wetlands from the federal program. See 4 Nat'l Wetlands Newsletter No. 1, at 5 (1982).
\textsuperscript{42} Reconsidering 404, supra note 7, at 81. This could effectively change the burden of proof to wetland preservation and would require time-consuming, costly, site-specific studies. See supra note 35.
\textsuperscript{43} See, e.g., W. Rodgers, Handbook on Environmental Law 401-03 (1977).
\textsuperscript{46} Reconsidering 404, supra note 7, at 44-45, 53. One administrative change that did take place between the Corps' 1975 interim final regulations and its 1977 regulations concerned the nature of the vegetation defining wetlands. The 1977 regulations eliminated the requirement that a prevalence of vegetation require saturated soil conditions and that the area be periodically inundated, requiring only that a prevalence of vegetation be typically adapted for life in saturated soil conditions. See id. at 48-49. The reason for this change had to do with the fact that it proved difficult to identify particular species that "required" saturated soil conditions and to determine the frequency of inundation implied by "periodically." Under the old definition, regulation of many important wetland areas was uncertain. The new definition provides for greater certainty, particularly if wetland
Nor has that recalcitrance fully abated. Since 1977 the Corps has effectively resisted extending the individual permit program to all wetland areas through the creative use of permits issued on a nationwide basis by notice and comment rule-making.47

Reluctantly conceding that the Corps' broad jurisdiction under the statute is constitutionally justified,48 Parish and Morgan posit that Congress intended Clean Water Act regulation to extend only to discharges into water bodies affecting navigation or interstate water quality. They find support for this position in an alleged lack of congressional findings concerning the necessity of wetlands regulation and two floor statements which they claim indicate congressional ambiguity concerning the Act's jurisdictional coverage.49 This argument, however, conflicts with the statute's express purposes,50 an unambiguous statement in the Conference Report of the 1972 legislation,51 and every judicial opinion that has considered the issue.52

Moreover, it is simply not true that discharges into wetlands above high water mark or into streams above their headwaters do not have important interstate effects.53 Filling of such wetlands can have deleterious effects on downstream flood control and on interstate travel, especially on the hunting and water-related recreation industries.54 The authors

47. See, e.g., 33 C.F.R. § 323.4-2 (1982) (exempting from permit requirements discharges into (1) non-tidal rivers and streams above their "headwaters" (see supra note 40), including adjacent wetlands; (2) lakes less than 10 acres, including adjacent wetlands; (3) other non-tidal waters not part of a surface tributary system).
48. See Reconsidering 404, supra note 7, at 52 nn.30, 33. Cf. id. at 46 (404 program "strays from its Congressional purpose and constitutional foundations").
49. See id. at 52.
50. "[T]o restore and maintain the chemical, physical, and biological integrity of the Nation's waters," including both interstate and intrastate waters, for public health, recreation, and fish and wildlife purposes. § 101(a), 33 U.S.C. § 1251(a) (1976). See supra text accompanying notes 36 and 37.
51. See Reconsidering 404, supra note 7, at 52.
52. See, e.g., cases discussed in YANNAKONE, supra note 5, at 333-41; Comment, supra note 5, at 10, 233-38.
53. While discharges above the headwaters are exempted from individual permit requirements by the Corps' nationwide permit for certain waters (see supra note 47), individual permits are required if the discharge fails to fulfill certain conditions, including having no effect on threatened or endangered species or their critical habitat. 33 C.F.R. § 323.4-2(b) (1982).
54. See, e.g., United States v. Byrd, 609 F.2d 1204 (7th Cir. 1979).
themselves provide an excellent example of how easily discharges above the headwaters of streams can have interstate effects; they cite the damming of arroyos in Colorado which will reduce South Platte River flows, adversely affecting critical habitat of endangered whooping cranes some 300 miles away in Nebraska.\(^{55}\) Such interstate effects on wildlife are commonplace; the authors’ attempt to characterize loss of wildlife habitat as a “local concern”\(^{56}\) overlooks numerous congressional findings to the contrary, as well as the migratory nature of many species of waterfowl and anadromous fish.\(^{57}\) Section 404 regulation of discharges into small water bodies is necessary to ensure that the widespread social costs associated with these discharges are not ignored.\(^{58}\)

While Parish and Morgan’s preferred “jurisdictional reform” is inconsistent with the purposes of the Act, its legislative history, numerous judicial interpretations, and the goal of cost internalization, their alternative suggestion of identifying and mapping wetlands has some merit. Wetland maps have been compiled by the U.S. Fish and Wildlife Service in its National Wetlands Inventory, but these maps are not conclusive for regulatory purposes.\(^{59}\) Perhaps these maps

---

55. Reconsidering 404, supra note 7, at 76-77 n.129. Cf. Nebraska v. Rural Electrification Admin., 12 Env't Rep. Cas. (BNA) 1156 (D. Neb. 1978) (Grayrocks Dam controversy which concerned North Platte River flows). In fact, discharges into small waterbodies often have the most serious adverse effects, since they can entirely destroy aquatic ecosystems. See Our Nation’s Wetlands, supra note 9, at 31-47 (describing destruction of wetlands in the name of agriculture, forestry, and industrial and residential developments).

56. Id. at 79.


58. Parish and Morgan assert that federal regulation over small waterbodies not historically subject to federal control is “contrary to public expectations and frequently unjustified.” Reconsidering 404, supra note 7, at 50. However, they provide no documentation to support this assertion. Of course, statutes are often designed to alter public expectations. This is particularly true with respect to resources, like wetlands, that in the past have been undervalued. Given the growing awareness of the importance of wetland areas (see supra text accompanying notes 10 and 35), it is likely that the public expects some sort of regulatory control over wetlands development. Note that this does not necessarily mean that wetlands development is forbidden, only that it is subject to intergovernmental review and public comment.

59. See 404 Program Perspective, supra note 17, at 445 n.190. Restricting 404 jurisdiction to traditionally “navigable waters” or “inundated lands” would exacerbate differences between the Inventory’s maps and 404 jurisdiction. See NAT’L WETLANDS NEWSLETTER No. 6, at 3 (1982).
should be revised to facilitate regulatory decisionmaking. But since the definition of wetlands is biologically based, the Fish and Wildlife Service, not the Corps, should do the mapping. Moreover, limiting such maps to include only "important" wetlands may be beyond the current state of the art. Further, in an era of diminishing regulatory budgets, mapping which is conclusive for jurisdictional purposes may be impractical unless it is paid for by wetlands developers, perhaps through user fees on large dischargers. If the present costs of uncertainty are as large as Parish and Morgan contend, developers may be willing to pay for the mapping to reduce these jurisdictional uncertainties.

IV. PERMIT STANDARDS

Parish and Morgan decry what they term numerous "self-imposed requirements" contained in the Corps' 404 regulations. They claim that the 404(b) guidelines are governed by few legislative standards and suggest that permit criteria not embodied in the guidelines are inappropriate. They are particularly critical of the Corps' public interest review, alleging that it is routinely employed to "blackmail" permit applicants into adopting mitigation measures. Parish and Morgan also assert that the Corps' general permit program is the "Jekyll and Hyde feature" of the 404 program because sometimes it is difficult for a permit applicant to be certain whether its proposed activity falls within the scope of a general permit. These criticisms are misguided: the authors fail to recognize that the public interest review and other requirements in the Corps' regulations are justified by statutes and Executive Orders, and that the general permit program suffers from defects much more serious that any uncertainty imposed upon permit applicants.

60. See supra notes 8 and 46. Since the definition is biologically based, public hearings on the maps would serve no useful purpose. Public involvement should await a proposed discharge, when the public's perceptions of costs and benefits may provide useful information on the question of whether and under what conditions a permit should be issued.

61. See supra note 35.


63. Id. at 80.

64. Id. at 62-63.

65. Id. at 58.
Terming the public interest review a “virtue in the abstract,” Parish and Mogan assert that because of “the absence of objective criteria,” the Corps possesses “excessive and uncontrolled discretion.” Notably, however, the authors cite no examples demonstrating any abuses of this discretion or any instances of “blackmailing.”

While it is true that the public interest review is not expressly authorized by the Clean Water Act, it is warranted by numerous other statutes, and has received longstanding validation from the courts. As long as it is not employed to override the 404(b) guidelines, the public interest review is a reasonable means of reducing the total social costs of authorized activities because it consolidates a number of review processes into a single permit decision and it facilitates consideration of site specific wetland values and project benefits. The guidelines themselves are grounded in a lengthy list of statutorily supplied criteria.

Although Parish and Morgan provide a useful overview of the wetlands, fish and wildlife, and water quality requirements contained in the Corps’ regulations, they erroneously contend that these requirements are unauthorized or duplicative of other processes. The goals of the Clean Water Act, the National Environmental Policy Act, the Fish and Wildlife Coordination Act, and the Endangered Species Act are to protect and preserve the nation’s fish, wildlife, wetlands, and water quality, and to coordinate environmental considerations into the federal decision-making process.

66. Id. at 62. See infra note 97.
69. The Corps may override the 404(b) guidelines only on grounds of navigation and anchorage, and such an override may be vetoed by EPA under section 404(c). See 404 Program Perspective, supra note 17, at 439. While 404 permits will not be issued after denials of required state permits, the issuance of state authorizations does not obviate the need to apply the 404(b) guidelines. See Blumm, Wetlands Protection and Coastal Planning: Avoiding the Perils of Positive Consistency, 5 COLUM. J. ENVT'L. L. 69 (1978).
70. The ocean disposal criteria contained in section 403(c) are incorporated in section 404(b). See Reconsidering 404, supra note 7, at 67 n.90. Parish and Morgan, however, claim that applying the 403(c) criteria to wetlands seems “technically infeasible” and “further evidence of congressional intent to regulate discharges only into truly wet areas.” Id. at 67 n.91. This is absurd. The 404(b) guidelines themselves do not have to be comparable to the ocean disposal guidelines; they must only be based in comparable criteria, and six of the seven criteria listed in section 403(c) are as applicable to wetlands fills as to ocean disposal. Thus, the Parish and Morgan contention that the guidelines “are presently governed by few clear legislative standards” (id. at 80) is also inaccurate.
71. Id. at 63-66, 67-68 n.92.
73. 42 U.S.C. § 4321 (1976). Parish and Morgan enigmatically suggest that the public interest review should be confined to “a NEPA context.” Reconsidering 404, supra note 7, at 80.
dination Act,\(^74\) and the Wetlands Executive Order\(^76\) justify these requirements. All of these directives apply independently to the Corps; to apportion the responsibility for their implementation among entities that do not have permit responsibilities, as Parish and Morgan suggest,\(^76\) would not constitute effective regulatory reform. Justifiable regulatory reform consolidates review procedures to reduce permit processing time and to prevent inconsistent results, which is precisely what the Corps' regulations seek to accomplish.

Parish and Morgan's complaints about the general permit program—the absence of determination of the "headwaters" of individual streams to identify areas subject to the Corps' nationwide permit for certain waters, and EPA "opposition" to the general permit program\(^77\)—overlook serious flaws in the

Perhaps the authors simply fail to recognize that NEPA applies to all federal actions, not just "major Federal actions significantly affecting the quality of the human environment" (\$ 102(c), 42 U.S.C. \$ 4332 (1976)—which is, of course, the trigger for preparation of an environmental impact statement, but not for other NEPA provisions. Moreover, the NEPA regulations require consolidated review procedures to the fullest extent possible. 40 C.F.R. \$ 1500.2(c) (1982).

74. 16 U.S.C. \$ 661-666c (1976). The authors allege that the Fish and Wildlife Coordination Act is "unclear" as to whether federally permitted activities (as opposed to federally funded projects) must maximize overall project benefits by including justifiable fish and wildlife measures recommended by fish and wildlife agencies. See Reconsidering 404, supra note 7, at 66 n.86 (citing BEAN, supra note 57, at 197-98, although the basis of the authors' reliance on that report is not apparent). If the statute is ambiguous regarding the deference owed to fish and wildlife agencies regarding non-federal projects, the Corps' regulations are not. See 33 C.F.R. \$ 320.4(c) (1982) (requiring that Corps officials give "great weight" to the views of fish and wildlife agencies in evaluating 404 applications, implicitly requiring the Corps to bear the burden of proof when rejecting the recommendations of fish and wildlife agencies). However, since the Corps' regulations have long recognized the deference due the recommendations of fish and wildlife agencies, any alteration would require a reasoned explanation for the change. See K. DAVIS, ADMINISTRATIVE LAW TREATISE \$ 17.07, at 258-59 (Supp. 1982). Perhaps a more significant criticism of the Coordination Act is that it exempts projects which affect 10 surface activities or less, as well as all federal land management activities. 16 U.S.C. \$ 662(b) (1976).

75. Exec. Order No. 11,990, 3 C.F.R. 121 (1977) reprinted in 42 U.S.C.A. \$ 4321 at 148 (Supp. 1982). Parish and Morgan assert that NEPA cannot be used "as authority to elevate specific environmental concerns where to do so would violate other statutes or where other considerations of national policy are involved." Because the Wetlands Executive Order "subordinates" other national policy considerations, the authors allege, it "exceeds NEPA authority and ... is probably unlawful." Reconsidering 404, supra note 7, at 74-78. Parish and Morgan cite Strykers Bay v. Karlen, 444 U.S. 223, 227 (1980) as support for this statement. In doing so, they fail to distinguish between the authority that NEPA confers upon courts to review the substantive decisions of administrative agencies, and the authority that NEPA confers upon administrative agencies to expand their mandates to include environmental considerations. While Strykers Bay makes it clear that the former is beyond the ability of the courts, the NEPA regulations not only authorize but mandate the latter, so long as such consideration is not inconsistent with other statutes. 40 C.F.R. \$ 1500.3 (1982). The authors fail to support their assertion with documentation of how the Wetlands Executive Order has resulted in the overriding of specific statutory directives.

76. Reconsidering 404, supra note 7, at 67-68.

77. Id. at 59.
general permit program itself. First, it is doubtful whether the nationwide permit for activities above the headwaters of streams satisfies the statutory requirement that such activities be similar in nature.\textsuperscript{78} Such a blanket authorization of discharges into certain waters assumes that all activities above the headwaters are similar in nature, which is undoubtedly an incorrect assumption. Second, the entire general permit program, which the Corps is in the process of expanding dramatically in the name of regulatory reform,\textsuperscript{79} may also fail to satisfy the statutory requirement that permitted activities produce only “minimal cumulative adverse effects.”\textsuperscript{80} The Corps neither systematically conducts cumulative impact studies on the general permits it issues, nor requires activities performed pursuant to general permits to be reported on a uniform basis.\textsuperscript{81} As a result, determinations of “minimal

\textsuperscript{78} Section 404(e)(1), 33 U.S.C. § 1344(e)(1) (Supp. V 1981). Section 404(e)(1) authorizes general permits in a state, regional, or national basis for activities that are (1) similar in nature; (2) cause only minimal adverse environmental effects when performed separately; and (3) have minimal cumulative adverse environmental effects. General permits must also be based on the 404(b) guidelines and include standards and conditions. 33 U.S.C. § 1344(e)(1) (Supp. V 1981). Presumably, the “similar in nature” provision requires the Corps to specify the kinds of activities that are permitted, not simply their location, in order to ensure that such activities are indeed ones that must necessarily be conducted in waterbodies. Cf. 33 C.F.R. § 320.4(b)(1982) (Corps regulations requiring that discharges in wetlands be necessary); 40 C.F.R. § 230.10(a)(1982) (404(b) guidelines requirement that all discharges have no practicable alternative that will have a less adverse impact on the aquatic ecosystem).

\textsuperscript{79} See 47 Fed. Reg. 31,794 (1982) (interim final regulations amending 33 C.F.R. §§ 320-330 to reduce permit processing time and to expand the nationwide permit program). On December 22, 1982, the National Wildlife Federation and 15 other environmental groups filed suit challenging six of the 27 nationwide permits issued in the Corps’ interim final regulations. National Wildlife Fed’n v. Marsh, Civ. No. 82-3632 (D.D.C., filed Dec. 22, 1982) (alleging, inter alia, that these nationwide permits unlawfully authorize activities that are not similar in nature and which have more than minimal adverse environmental impacts).

Of particular concern are the new nationwide permits authorizing discharges into non-tidal waters above their headwaters (33 C.F.R. § 330.4(a)(1)(1982)) and into non-tidal waters that are not part of a surface tributary system (33 C.F.R. § 330.4(a)(2)(1982)), since they eliminate the condition contained in previous nationwide permits that limited the scope of the permits to waterbodies of 10 surface acres or less. The effect of the new permits, the environmental groups allege, is to remove vast amounts of wetlands from effective regulation, including 700,000 to 900,000 acres of prairie potholes, 73,000 acres of Pocono Mountains wetlands, thousands of acres of inland wetlands in New Jersey and New York, 500,000 wetland acres in both Michigan and Wisconsin, and millions of acres in Alaska. National Wildlife Fed’n v. Marsh, Civ. No. 82-3632, at 22-23.

The suit also challenges the Corps’ “state program general permits,” which exempt from individual permit requirements activities that are subject to some degree of state regulation, as an unauthorized attempt to evade the state permit program approval process specified in §§ 404(g) and (h). Civ. No. 82-3632, at 58-62. For an evaluation of the state role in the 404 program, see 404 Program Perspective, supra note 17, at 453-63. For a summary of the controversy surrounding the Corps’ proposed Louisiana state program general permit, see 4 Nat’l WETLANDS NEWSLETTER No. 5, at 5-6 (1982).


\textsuperscript{81} See W. Lazar, Section 404 Dredge and Fill General Permits: How They Work and Are They Working? (May 12, 1982) (Environmental Extern paper on file at Lewis and Clark Law School Library) (reviewing general permits issued by a number of Corps District
effects” are largely undocumented. While general permits are a justifiable means of maximizing scarce administrative resources, they are warranted only if they contain conditions designed to ensure that the effects of individual activities are in fact minimal, and only if accompanied by systematic cumulative impact studies.

It must be emphasized that activities authorized by general permits are nevertheless permitted activities: they are not exempt from regulation and oversight. General permits, like other permits, are subject to defeasance because of changed conditions or erroneous impact estimations. Unless the nature of these authorizations is understood by both permittees and regulators, general permits will not accomplish their goal of reducing transaction costs “without resulting in lessened environmental protection.”

V. PERMIT PROCEDURES

Parish and Morgan are particularly critical of the process for obtaining 404 permits, claiming that it is burdened with “numerous non-regulatory agreements.” They question the role of the Environmental Protection Agency and federal and state fish and wildlife agencies in the permit process, and they recommend that Congress amend section 404 to eliminate the interagency pluralism that now characterizes the implementation of the program. The authors assert that this concept of shared powers “emasculates the Corps as a decision-maker,” rendering “all but the bravest Corps employee powerless in the face of sister agency objections.”

office and concluding that cumulative impacts “have never been analyzed and therefore remain largely a matter of speculation” (id. at 52)). See also 404 Program Perspective, supra note 17, at 431-32 (no reporting). Over five years ago, the General Accounting Office criticized the Corps’ lack of cumulative impact assessments. U.S. COMP. GEN., IMPROVEMENTS NEEDED IN THE CORPS OF ENGINEERING REGULATORY PROGRAM FOR PROTECTING THE NATION’S WATERS, CED-78-17, at 5-6 (Dec. 23, 1977).

82. See notes 53 and 78.
83. Reconsidering 404, supra note 7, at 79. One student of the 404 program suggests that an adequate general permit should contain six elements: (1) a clear identification of permitted activities; (2) a limitation on activities which may be conducted in waterbodies; (3) permit conditions; (4) a surveillance and monitoring program; (5) a reporting requirement; and (6) a permit impact review process. Lazar, supra note 81, at 20.
84. Reconsidering 404, supra note 7, at 45.
85. Id. at 80.
86. Id. at 72-73.
Parish and Morgan incorrectly assume that the 404 program is the Corps’ own, a kind of fiefdom in which morale is undermined by sharing authority with other agencies.\(^87\) In reality, the unmistakable determination of Congress is that EPA and federal and state fish and wildlife agencies have important 404 roles to fulfill. In fact, a good case can be made that EPA and the fish and wildlife agencies are the principal 404 agencies.\(^88\) EPA promulgates the 404(b) guidelines, reviews 404 permits for compliance with the guidelines, and can veto permits and authorize state programs.\(^89\) Fish and wildlife agencies possess the biological expertise to assess the impacts of proposed activities and to help design permit conditions and mitigation measures.\(^90\)

There is little or no evidence that existing review procedures cause unnecessary delays in permit processing. In fact, a recent study by the Corps’ Institute of Water Resources concludes that mitigation measures and project modifications developed during the intergovernmental permit review process are responsible for reducing annual wetlands losses by one-half, and that such modifications are responsible for reducing project costs 30-50% of the time—an estimated savings to project proponents of between $135 and $270 million in 1980 alone.\(^91\) Moreover, another study found that the principal causes of delays in permit processing are not attributable to either EPA or the fish and wildlife agencies, but to the Corps, the applicant, and the state water quality certification process.\(^92\) Further, most permits are processed within 75 days, the vast majority within 120-150 days, and only about one per-

\(^87\) Id. at 56-57 (claiming that the Memorandum of Understanding between EPA and the Corps establishing procedures for making jurisdictional determinations “undermines the Corps’ control of its program”).

\(^88\) See 404 Program Perspective, supra note 17, at 437-45, 469-71.


mit in a thousand is elevated under interagency appeal procedures.\(^{93}\) Clearly, the benefits of this pluralistic process far exceed its costs.

In the past, the Corps has complained that administrative appeals undermine its "decentralization" policy, which is purportedly designed to give local District Engineers freedom to take into account local conditions in operating the permit programs.\(^{94}\) However, it is now apparent that the motivation for this policy has less to do with decentralization than with a desire to issue more permits.\(^{96}\) Parish and Morgan's suggestions concerning the elimination of interagency appeals, the abolishment of EPA's 404(c) authority, and the restriction of appeals to the permit applicant would effectively establish the Corps as a super 404 agency.\(^{96}\) Repealing section 404(c) would leave the Corps, the nation's largest dredger, able to dispose of its dredged spoils unencumbered by interagency oversight. There is simply no reason to believe that making the Corps a "404 czar" would reduce the social costs of wetlands development. More fundamentally, there is little or no evidence to suggest that the present program is deficient.\(^{97}\)

\(^{93}\) Nat'l Wildlife Fed'n Report, supra note 92, at 6. These figures belie Parish and Morgan's allegations about the availability of administrative appeals enabling EPA and fish and wildlife agencies to "rock the regulatory boat." Reconsidering 404, supra note 7, at 72. One Corps-instigated measure to reduce the waves rocking the boat is the requirement that elevation of permit reviews to higher Corps officials be requested by that official's counterpart in the objecting agency. Reconsidering 404, supra note 7, at 71 n.113. This "reform" is obviously aimed at reducing the ability of fish and wildlife agency biologists to "go over the head" of local District Engineers, a long-standing Corps complaint. See 404 Program Perspective, supra note 17, at 444. Arguably, this also makes it less likely that permit elevations will be made in biological grounds. For a description of permit elevation procedures, see 404 Program Perspective, supra note 17, at 438-39, 443 n.176.

Another Corps measure was a June 8, 1982, directive from Headquarters that all District Engineers issue or deny permits within 60 days, subject to limited exceptions. However, when some Districts responded to this directive by attempting to shorten the public comment period, protests from environmental groups and from fish and wildlife agencies caused Headquarters to issue another directive on September 22, 1982, explaining that an across-the-board shortening of the public comment period was not the intent of the original directive. See Nat'l Wetlands Newsletter No. 5, at 6-7 (1982).

\(^{94}\) See 404 Program Perspective, supra note 17, at 438, 470. This policy incurred the criticism of the General Accounting Office because it enabled authorization of harmful activities in the name of local control. See GAO Rep. No. CED-78-17, supra note 81, at 3, 5, 14.

\(^{95}\) If decentralization were a paramount concern, the Corps would not be proposing a nationwide permit authorizing discharges undertaken or regulated by other federal agencies and removing District Engineers' authority to withdraw nationwide permits. See Reconsidering 404, supra note 7, at 57-58 n.50.

\(^{96}\) Id. at 73, 80-81. The alleged "emasculating" of the Corps by an EPA veto is not "rare"—it is unprecedented, although it is true that EPA has considered invoking this authority. See 404 Program Perspective, supra note 17, at 439 n.157.

\(^{97}\) If the Corps persists in its attempts to restrict the program (see supra note 21), perhaps Congress should remove regulatory functions from the Corps and authorize EPA and the
VI. Conclusion

To assert that the present 404 program is not deficient is not to say that it cannot be improved. In the course of reconsidering the Clean Water Act, Congress should consider a number of measures to improve the operation of the program.

First, it should establish a fund specifically to encourage the adoption of state 404 programs. Without financial assistance, there is no incentive for states to operate the program, an overriding goal of the Clean Water Act.98 Second, Congress should authorize state programs to operate in all waters subject to state jurisdiction; so long as federal review of fish and wildlife agencies to operate the permit program, decreasing the Corps’ budget commensurately.

In response to a draft of this article, Michael Morgan sent to the Land and Water Law Review four examples in Colorado and Utah in which 404 regulation assertedly produced unnecessary burdens on landowners. (These summaries are on file at the Land and Water Law Review office). Two of the examples involve wetlands which allegedly were created by non-natural causes (through irrigation of bottom lands and due to a poorly culverted railroad); one concerned a fill in saturated soils adjacent to a lake; and the last involved a road constructed on lands periodically inundated by an adjacent creek. In all of the examples the landowners claimed a lack of notice that they were filling wetlands subject to federal permit requirements, and two disputed the Corps’ jurisdiction.

First of all, any permit program may produce isolated examples of poor decision-making. The question is whether the costs of poor decisions are worth tolerating because of the value of the resources which are the subject of the regulation. Second, none of the four examples demonstrate that any injustice in fact occurred, since none of the landowners were denied a permit. All of the examples involve simply a determination that a permit would be necessary. This failure to exhaust administrative remedies makes it impossible to determine how the permit process would have affected the proposed developments.

These examples, however, do call into question some administrative practices, particularly the Sacramento District’s apparent insistence that any unauthorized fills be removed before an after-the-fact permit application would receive consideration. The Corps’ regulations do not require such restoration (see 33 C.F.R. § 326.5 (1982)), and it would seem that such decisions should be made in a case by case basis, taking into account such factors as the size of the fill, the value of the wetlands, and the good faith of the applicant. Similarly, whether or not non-naturally produced wetlands should be preserved should be a site specific determination, in order to ensure that the wetlands are indeed non-natural and to consider their value. These are questions that the permit process is well suited to resolve, and in certain areas, perhaps can be made through the issuance of general permits specifying conditions and limitations.

Claims of a lack of notice will continue to plague the program until regulatory maps are developed and until the Corps develops better working relations with local governments, so that 404 permit criteria become a factor in local land use decisions. In 1977, Congressman Edgar suggested that the Corps study how to best reconcile state and local decision-making with 404 regulation (see 404 Program Perspective, supra note 17, at 466 n.300), but recent efforts to involve states and local governments in the 404 program are of questionable legality. See supra note 79.

and oversight is maintained,\textsuperscript{99} it makes little sense to exclude coastal and traditionally navigable waters from state 404 authority. Third, Congress should require the Corps to conduct cumulative impact studies on all general permits that have been issued and should carefully consider whether the Corps' expansion of the general permit program meets statutory requirements.\textsuperscript{100} Fourth, Congress should investigate the interagency Memoranda of Agreement authorized by section 404(q) to ensure that the effective functioning of federal fish and wildlife agencies, particularly their ability to pursue administrative appeals, has not been impaired.\textsuperscript{101} Fifth, Congress should consider eliminating the requirement that a "discharge" be present to trigger 404 permit requirements. Many drainage activities that can destroy wetlands do not necessarily involve discharges\textsuperscript{102}—if the 404 program is to effectively protect wetlands, its scope should be at least as broad as that of the Corps' section 10 permit program.\textsuperscript{103} Sixth, consideration should be given to establishing wetland maps for regulatory purposes, if the costs involved are less than the resulting benefits to permit applicants.\textsuperscript{104} Finally, given the significant portion of the nation's wetlands resource which has been destroyed,\textsuperscript{105} the widespread and significant benefits of wetlands,\textsuperscript{106} and the still expanding body of knowledge concerning wetlands values,\textsuperscript{107} Congress should expressly direct that these critical areas be protected by permit criteria that include a margin of safety.\textsuperscript{108}

The 404 program's "adolescence"\textsuperscript{109} has proved to be nearly as rocky as its youth. In advocating significant cutbacks in its geographic scope and significant increases in Corps' responsibility for the operation of the permit program, Parish

\textsuperscript{100} See supra notes 78, 81 and 83.
\textsuperscript{101} For a description of section 404(q) and some of the controversies surrounding the development of 404(q) Memoranda of Understanding, see 404 Program Perspective, supra note 17, at 443-45.
\textsuperscript{102} See supra note 16.
\textsuperscript{103} For a discussion of the differences between Corps' jurisdiction under section 10 of the 1899 Rivers and Harbors Act and section 404, see 404 Program Perspective, supra note 17, at 414-19.
\textsuperscript{104} See supra text following note 61.
\textsuperscript{105} See supra notes 11-12.
\textsuperscript{106} See supra text accompanying note 10.
\textsuperscript{107} See supra note 35.
\textsuperscript{108} See Thompson, Margin of Safety As a Risk Management Concept in Environmental Legislation, 6 Colum. J. Envtl. L. 1 (1979).
\textsuperscript{109} See supra note 17.
and Morgan have not made a helpful contribution to 404 scholarship. They suggest facile solutions in the name of regulatory relief without supplying any concrete documentation that the program needs the changes for which they call. In fact, the expanding awareness of the economic benefits of wetlands preservation and fish and wildlife protection\textsuperscript{110} argues for expanded, not restricted, 404 regulation. By providing a process for widespread intergovernmental and public review of activities adversely affecting these important natural resources, Congress has created a regulatory program that has both preserved important ecosystems and produced more cost-effective resource development.\textsuperscript{111}

Adopting Parish and Morgan’s recommendations would allow developers and the Corps to make important aquatic development decisions in the absence of adequate information.\textsuperscript{112} At best, these “regulatory reforms” would result in a reduction of the total social costs of development only by happenstance. At worst, they would dramatically increase the 300,000 acres of wetlands destroyed each year. They do not warrant serious consideration by Congress.

\textbf{AUTHOR’S POSTSCRIPT.}

After this article was in press, the Corps proposed amendments to its permit program regulations which (1) include an unprecedented assumption in favor of permit issuance (in the case of § 10 permits only); (2) reduce the weight attached to fish and wildlife agency recommendations in its public interest review; (3) eliminate public review of proposed “minor” discharges; (4) refuse to impose reporting requirements on individuals operating under general permits; and (5) fail to adopt EPA’s definition of “waters of the United States.” See 48 Fed. Reg. 21,446 (May 12, 1983), discussed in Natural Resources Law Institute, 23 \textit{Anadromous Fish Law Memo} (Aug. 1983).

\textsuperscript{110} For example, one recent study estimates annual fish and wildlife losses of $372 million resulting from failure of the Federal Columbia River Power System to adequately protect anadromous fish runs. \textit{See P. Meyer, Fish, Energy and the Columbia River: An Economic Perspective on Fisheries Values Lost and At Risk} (May 1982), summarized in \textit{Nat. Resources L. Inst.}, 18 \textit{Anadromous Fish L. Memo} 9 (May 1982).

\textsuperscript{111} \textit{See supra} text accompanying note 91.

\textsuperscript{112} It should be reemphasized (\textit{see supra} note 58) that even with a “margin of safety” concept, 404 permit jurisdiction is not tantamount to establishing a sanctuary. Discharges are permitted where their benefits exceed their costs—however, the 404 program supplies some insurance that the costs of development are not ignored or underestimated.