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INTERAGENCY DISPUTES OVER DRYFIELDS OR CLEAN WATER: A CASE STUDY OF THE CONFLICT BETWEEN AGRICULTURAL DRAINAGE PROGRAMS AND THE CHESAPEAKE BAY CLEANUP

Timothy J. Lindon* and Mark P. Gergen**

Despite growing recognition of the threat posed to the Chesapeake Bay by agricultural runoff, the United States Soil Conservation Service (SCS) continues to plan and fund agricultural drainage projects which will inevitably worsen the already critical condition of the Bay. This article focuses on one such project — the Upper Chester River Watershed Project (the Project) — now under consideration for the Delmarva Peninsula in Maryland and Delaware. This project has been criticized by federal and state environmental agencies, including the United States Environmental Protection Agency (EPA), the United States Fish & Wildlife Service (FWS), and the Maryland Department of Natural Resources and State Planning, who together have warned of the damaging effect the Project might have on the Bay ecosystem. This article is a case study of the environmental peril posed by such agricultural drainage projects, and of the difficulty environmental agencies confront in seeking to compel other agencies, with different interests and constituencies, to consider adequately the harmful environmental consequences of their actions.

This article first describes the Upper Chester River Project and the controversy it has engendered. It then turns to federal regulation of such projects, asking whether current law provides sufficient mechanisms to ensure that the concerns of environmental


The authors represent a coalition of national, state and local civic and environmental groups in connection with the Upper Chester River Project. These organizations include: the Environmental Policy Institute, the Natural Resources Defense Council, Inc., the Maryland Wetlands Committee, the Izaak Walton League of America, the Harford and Talbot County Chapters of Izaak Walton League, the Chesapeake Watershed Association, Inc., the Committee to Preserve Assateague Island, the Chesapeake Environmental Protection Association, Inc., the Maryland Conservation Council, the American Littoral Society, the Sierra Club Legal Defense Fund, the Potomac Chapter of the Sierra Club, the Green Valley Association, the Worcester Environmental Trust, and the Worcester Environmental Fund. The views expressed in this article are not necessarily those of these organizations.
agencies are addressed in the planning and implementation of agricultural drainage projects by SCS and the United States Army Corps of Engineers (Corps). Experience with the Upper Chester River Project suggests currently employed mechanisms are insufficient to ensure that SCS and the Corps address environmental concerns adequately. Because of the great danger the Project poses to the Chester River and the Bay ecosystem, this article proposes that EPA exercise its preemptory authority under the Federal Water Pollution Control Act (FWPCA) to prohibit or restrict the Upper Chester River Project. Although EPA has rarely exercised this authority, the great significance and fragility of the Bay and the leading role of EPA in the study and protection of the Bay present a compelling case for its use.

I. Background

Despite growing public recognition of the fragility of the Chesapeake Bay ecosystem, and of the contribution of traditional agricultural practices to the Bay's plight, SCS continues to plan large-scale ditching and channelization projects in the Bay region which will accelerate the contribution of agricultural pollution to the decline of the Bay. SCS's activities with respect to one such project — the Upper Chester River Watershed Project — provide an excellent case study of SCS's historic insensitivity to environmental concerns and its unwillingness to recognize legitimate environmental criticisms raised by other federal and state agencies with environmental expertise.

A. Agricultural Practices and the Bay

In 1983, after seven years of analysis and at a cost of approximately $27 million, the EPA completed an exhaustive study of the ecological problems of the Chesapeake Bay. The principal finding of the EPA Bay Study was that the Chesapeake Bay is "an ecosys-

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1 The Corps must grant a permit under the Federal Water Pollution Control Act (FWPCA) for a project to proceed. 33 U.S.C. § 1344 (1982). See infra notes 98-112 and accompanying text.

2 EPA, Chesapeake Bay: A Framework for Action (Sept. 1983) (hereinafter cited as EPA Bay Study). The Bay Program also produced four additional reports: Chesapeake Bay: Introduction to an Ecosystem (Oct. 1982); Chesapeake Bay Program Technical Studies — A Synthesis (Oct. 1982); Chesapeake Bay Program: Technical Project Summaries (Oct. 1982); and Chesapeake Bay: A Profile of Environmental Change (Oct. 1983).
tem in decline." This finding did not surprise those who for many years have seen that changes for the worse have been taking place. Of particular importance was extensive documentation in the Bay Study showing that agricultural practices have significantly contributed to the decline of the Bay.

The EPA Bay Study identified several related causes of the Bay's decline which have in significant part been caused, both directly and indirectly, by farming and by agricultural drainage programs funded by SCS. First, the Bay Study found that increasing levels of nutrients (primarily nitrogen and phosphorus) in many areas of the Bay have led to declining water quality. This increase in nutrients stimulates growth of algae and phytoplankton and prevents the dissolution of oxygen, all of which harm the indigenous population of fish and invertebrates in the Bay and hasten the destruction of the vegetation upon which those populations depend. Nutrients may enter the Bay both from point sources, such as sewage treatment plants, and from non-point sources, such as agricultural and urban runoff. The Bay Study found that runoff from cropland and other non-point sources is the major source of nitrogen to the nutrient-enriched areas of the Bay. These non-point sources contribute 67 percent of the total nitrogen load to the Bay in a year of average rainfall. Most important, the Bay Study concluded that farmland generates by far the largest share of the non-point source nutrient load, or between 27-53 percent of the total phosphorus load and 60-75 percent of the nitrogen load in average and wet years. Important forms of agricultural runoff are commercial fertilizers, manure, herbicides and pesticides.

Second, the Bay Study found that the amount of submerged aquatic vegetation has dramatically declined throughout the Bay

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* EPA Bay Study, supra note 2, at xv.

* The EPA Bay Study's finding of deterioration is consistent with the finding of the numerous prior studies and books on the Bay. See, e.g., Capper, Powers & Shiver, Chesapeake Waters (1983); Proceedings of the Bi-State Conference on the Chesapeake Bay 42-45 (1977).


* EPA Bay Study, supra note 2, at 39-45, 60-88.

* Id. at xvii. The contribution of cropland runoff during dry years was not estimated.

* Id. at 61.

* Id., Appendix at C-5 - C-8.
in recent years. Submerged aquatic vegetation is an essential food source for waterfowl, such as ducks and geese, and for some fish. It also provides habitat for many organisms, including nurseries for juvenile stages of some fish and refuge for molting blue crabs and other invertebrates. The decline in submerged aquatic vegetation has therefore led to a significant decline in species diversity, particularly in the upper Eastern Shore tributaries of the Bay, which include the Chester River.

The decline in the amount and quality of submerged aquatic vegetation is partially attributable to agricultural programs. By ditching and draining poorly drained soils, SCS-funded projects increase the amount of land suited for farming and encourage more intense agricultural activities upon newly drained wetlands. More agricultural activities increase nutrient loading — primarily runoff fertilizers — and the flow of chemicals — primarily runoff pesticides — to the Bay, thereby choking off submerged aquatic vegetation.

Third, the ditching and channelization projects funded by SCS to deepen and widen streams in the Bay region have destroyed thousands of acres of valuable wetlands, and trees, shrubs, grasses and other vegetation along the streambanks. Wetlands are precious. They effectively block nutrient flow and filter nutrients and pollutants generated by nearby agricultural fields. For many species of waterfowl and fish, the wetlands provide essential food, habitat, and breeding grounds. Similarly, the destruction of

10 Id. at 22-23. Annual surveys of submerged aquatic vegetation have shown that the number of vegetated stations in Maryland dropped from 28.5 percent in 1971 to 4.5 percent in 1982.
11 Id. at 23.
12 For example, FWS has estimated that the Upper Chester River Watershed Project could affect over 3,000 acres of sensitive wetland. Letter from Glen Kinser, FWS, to David Carpenter, SCS (Nov. 16, 1982). The SCS has suggested, however, that the number of acres of wetlands which would be affected is significantly less than 3,000. See infra text accompanying note 54.
13 See EPA Bay Study, supra note 2, at 37-65
14 See generally Office of Technology Assessment, Wetlands: Their Use and Regulation 36-65 (1984). Executive Order 11990, 3 C.F.R., 1977 Comp., p.121, recognizes the value of wetlands and seeks to prevent federal funds and assistance from aiding their unnecessary destruction. It provides, in part:

Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing and disposing of Federal lands and facilities; and (2) providing federally undertaken finances, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not lim-
streamside woodland by “clear-cutting” vegetated areas removes an important habitat for wildlife. In addition, removal of overarch- ing tree canopy, which provides shading for a stream, produces a rise in water temperature that may significantly decrease the di- versity of fish species found in a stream.  

In light of the continuing contribution of agriculture to the de- cline of the Bay, the EPA Bay Study recommended that long-term strategies seek to maintain or further reduce nutrient loads to help restore the Bay’s resources. Specific policies recommended include incentives to farmers to maintain sensitive or marginal farmland out of production and tax and other incentives to encourage farmers to implement best management practices to reduce agri- cultural runoff.  

In addition, as a consequence of the Bay Study’s finding that agricultural practices significantly contribute to the problems of the Bay, the States of Maryland, Virginia and Pennsylvania have initiated major efforts to reduce contributions of nutrients from farms. For example, prior to the EPA Bay Study, Maryland had not adopted a rigorous regulatory program to change the practices of its agricultural community nor did it provide the technical or financial assistance necessary to implement local control pro- grams. Since the Bay Study, however, Maryland has assigned over 40 new technical specialists to work with farmers to ensure that conservation plans implementing “best management prac- tices” are in place in the next five years and has begun a cost-share program funded at between $5-8 million per year to provide up to

1985] Agricultural Drainage Programs 223

15 See generally Barlow, Why Streams Need Trees, Garden, March/April 1982; EPA, Environmental News, Dec. 31, 1984 (“The clearing of trees, shrubs, and grasses, and other vegetations along the stream banks that usually occurs results in increased exposure of the water to sunlight. It also eliminates the stream-side habitat for wildlife species such as deer, turkey, wood ducks, and a variety of bird species.”).

16 EPA Bay Study, supra note 2, at 87. This could be done through use of the U.S. Department of Agriculture’s Payment-in-Kind Program or similar state or local efforts. Id.

17 Id. at 87-88.

18 See The Chesapeake Bay: Major Research Program Leads to Innovative Implementation, supra note 5, 14 Envtl. L. Rep. at 10242-44.

19 Id. at 10242.
87.5 percent of the cost of implementing these management practices.²⁰

B. SCS Agricultural Programs

At the same time, SCS has continued to plan projects to increase the amount of agricultural land in the Bay region, often in sensitive environmental areas. These programs are consistent with the principal purpose of the SCS and the agency's traditional role of assisting farmers. However, these programs may not be consistent with the effort to improve the water quality and living resources of the Bay.

SCS was established under the authority of the Soil Conservation Act of 1935 as an agency within the U.S. Department of Agriculture.²¹ Its principal purpose has been to provide for the preservation and improvement of the fertility of agricultural soil.²² While SCS programs have always had significant potential for reducing water pollution by reducing sedimentation caused by agricultural runoff, it was not until 1972 that the "prevention and abatement of agricultural-related pollution" were enumerated as additional goals of SCS.²³

²⁰ Id. In 1984, Maryland enacted legislation which requires a public drainage association to obtain prior approval from the Secretary of Agriculture for construction, operation, and maintenance plans in agricultural drainage projects. The plans must also be reviewed by the Secretaries of Natural Resources and Health and Mental Hygiene prior to approval. In enacting this legislation, the General Assembly recognized "that agricultural drainage projects, if not properly designed, operated, and maintained, have the potential to contribute non-point source pollutants to the waters of the State." Md. Agric. Code Ann. § 8-603 (1984 Cum. Supp.). The State of Maryland cannot, however, require best management practices with respect to the Upper Chester River Project and other SCS projects which are not financed by the State. Letter from Wayne A. Crawley, Secretary, Maryland Department of Agriculture to Mark P. Gergen 4 (Feb. 13, 1985).

²¹ 16 U.S.C. § 590(a)-(f)(1982). The immediate predecessor of SCS was the Soil Erosion Service, which was established in 1933 as a division of the Department of the Interior. Pub. L. No. 73-67, 48 Stat. 195, 201 (1933). Prior federal soil conservation efforts, which began as early as 1894, were concentrated in the Bureau of Chemistry and Soils of the U.S. Department of Agriculture.


²³ Pub. L. No. 92-419, 86 Stat. 676 (codified in 16 U.S.C. § 590(g)(A)(6)) (1982). These goals were added in connection with passage of Section 208 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1288 (1982). Section 208 requires States to submit a State Water Quality Management Plan to the Environmental Protection Agency. The Plan must both "identify, if appropriate, agricultural non-point sources of pollution. . . . and. . . . set forth procedures and methods (including land use requirements) to control to the extent feasible such sources." 33 U.S.C. § 1288(b)(2)(F) (1982). Prior to the EPA Bay Study, the states in the Bay region had suggested schemes for controlling pollution from agricultural sources as part of the Section 208 planning process, but did little to imple-
Agricultural Drainage Programs

The most significant SCS activity in the Bay region has been the agency's Small Watershed Program. Under this program, SCS enters into Watershed Agreements with local organizations qualifying as sponsors. These sponsors are generally local soil conservation districts, which are subdivisions of the State created by majority vote of the land occupiers in the proposed district. SCS assists the local sponsors in preparing a soil conservation plan for the relevant watershed. If SCS and the sponsors agree upon a final plan, SCS then provides technical and financial assistance to construct the project. The SCS contribution generally ranges from 50-100 percent, depending on the type of work to be performed, and the local sponsors cover the remaining costs.

The environmental and soil conservation record of SCS's Small Watershed Program is mixed. Since 1954, approximately $2 billion has been spent on the program. Yet, soil erosion is estimated to be 25 percent worse today than in the 1930's. Much of SCS's poor record is attributable to the formidable task of controlling erosion and runoff on nearly two billion acres of land. Many of SCS's shortcomings, however, may be traced to conflicting goals for soil conservation programs. The SCS and its predecessors were formed largely to create jobs during the Depression, rather than to combat soil erosion. In the succeeding years, the majority of its funds have gone to relatively expensive drainage projects, which extensively damage wetlands and other riparian habitat, rather than to less costly non-structural measures for erosion control. SCS continues to emphasize production-oriented practices over conservation goals. Further, SCS has suffered from problems of

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See The Chesapeake Bay: Major Research Program Leads to Innovative Implementation, supra note 5, at 10242.

See 16 U.S.C. §§ 1001-09 (1982); 7 C.F.R. § 622 (1984). The SCS has participated in numerous watershed projects in the Chesapeake Bay region. These projects have resulted in the destruction of thousands of acres of wetlands. There are currently 72 SCS watershed projects in the Bay region, 37 of which have been completed. Transcript of Roundtable Discussion of the Federal Role in the Chesapeake Bay Cleanup Program 13 (Aug. 8, 1984). The SCS maintains offices in many of the counties in the Bay region, staffed by approximately 300 SCS employees. Id. at 12.


See Why Streams Need Trees, supra note 15.

factionalism and lack of coordination. Throughout its history, federal soil conservation efforts have been subject to a variety of pressures, most notably from other federal agencies and from outside agricultural interests.31

Finally, SCS projects have often suffered from the agency's failure to perform an objective analysis of the environmental and economic costs and benefits of a project prior to construction. For example, the SCS's proposal to ditch and channel Nibbs Creek in Virginia was recently halted by a court which found that SCS's Environmental Impact Statement (EIS)32 for the project was not objective and was so lacking in detail as to constitute "a sufficient flaw to render it less than that required by the laws and regulations."33 Similarly, the Chesapeake Bay Foundation, EPA and a number of other federal environmental agencies have severely criticized SCS for its lack of objectivity and for underestimating the environmental costs in a recent EIS submitted for the Bush River Project in Virginia.34

C. Upper Chester River Watershed Project

The Chester River, which flows from the junction of the Cypress and Andover branches of the upper portion of the Eastern Shore of Maryland to the Chesapeake Bay, is of vital environmental significance in the Bay region. Unlike the Susquehanna, Potomac and James Rivers, which are presently major sources of nutrients to the

31 See Soil Conservation and Water Pollution Control, supra note 30, at 365; R.B. Held and M. Clawson, Soil Conservation in Perspective 46 (1965).
32 See infra notes 86-88 and accompanying text for a discussion of the purposes and requirements in preparing an EIS.
33 Citizens for the Preservation of Nibbs Creek v. Bergland, No. 79-0778-F, slip op. at 7, (E.D. Va. 1980). The Court concluded with the following question about SCS' efforts: "[W]eren't they trying to write a propaganda piece, rather than an objective study?" Id. at 8.
34 Letter from Jeter M. Watson, Chesapeake Bay Foundation, to Colonel Claude D. Boyd III, District Engineer, U.S. Army Corps of Engineers (Sept. 19, 1984). For example, in response to a comment by FWS that the Draft EIS provided inadequate consideration of alternatives, SCS refused to expand its consideration of alternatives, simply asserting that "[a]ll reasonable alternatives were formulated and evaluated as required." EIS, infra note 40, at 101-102. In response to a comment by EPA that a worst case analysis was necessary and that the effect of farmers failing to use no-till methods should be considered, SCS merely repeated the methodology by which it had computed anticipated crop yields to measure project benefits, without considering the potential costs in a "worst case" scenario. Id. at 96-97. Examples such as this confirm the criticism by the U.S. Department of the Interior that SCS's responses to comments in the final EIS were "for the most part, vague and general in nature with few specific facts to back up the response." Letter from U.S. Department of Interior to SCS (Aug. 24, 1982).
Bay, the Chester River remains largely unspoiled and so makes an important contribution to the Bay region. EPA has found that the Chester River supports 9.2 percent of the Bay’s submerged aquatic vegetation and must, therefore, be managed effectively. It is an important spawning ground of rockfish in the Chesapeake Bay, and supports a large population of estuarine, fresh water and seasonal anadromous fish. The Chester River wetlands are an important habitat for migratory fowl, fish and wildlife. The watershed is the most important wintering area of Canadian geese on the Atlantic flyway and a major wintering area for many other species. For these reasons, the Maryland Rivers Study identified the Chester River as a “Category 1” River, which means that the River is of greater than statewide significance.

In July 1982, SCS published an EIS for the Upper Chester River Watershed Project. The local sponsors of the Project are the Del-

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56 EPA Bay Study, supra note 2, at 39-49.
57 For a general description of the Chester River, see Bostater et al., Chester River Intensive Watershed Study (1983).
58 Letter from Thomas P. Eichler, Regional Administrator, EPA, to Gerald C. Brown, District Engineer, U.S. Corps of Engineers, Appendix A at 6 (Feb. 22, 1984). The letter notes that the “unprecedented decline in the distribution and abundance of submerged aquatic vegetation” in the Chesapeake Bay has been linked to “changes in water quality, including increases in sediment, nutrient, and herbicide inputs from diffuse or non-point sources,” such as farm runoff. Id.
59 The poor soil drainage characteristics in the Chester River Watershed, which have limited farming practices in some areas, are a major factor in permitting valuable upland wildlife habitat to develop, including migratory and wintering cover for woodcock. The U.S. FWS has concluded that “the conversion of these poorly drained areas to tillable acreage will further reduce the total upland wildlife habitat available.” FWS, Scope of Problems — Chester River SCS Project 1 (Oct. 18, 1982).
60 The Study rated the Chester River “most significant” with respect to critical ecological factors, waterfall, spawning and propagation of fish, fowl and wildlife, upland natural areas, and scenic areas. The Study also identified the areas as “significant” with respect to wetlands, sport fishing and undeveloped lands.
61 U.S. Dept. of Agric.-SCS, Upper Chester River Watershed Plan and Environmental Impact Statement (July 1982) (hereinafter cited as EIS). In July 1981, SCS had completed a Draft EIS for the Project, which was circulated for comments. All of the environmental agencies which commented on the Draft EIS found the document deficient in its analysis of the environmental impacts of the Project and criticized SCS for failing to adequately consider alternatives to the selected plan. For example, the U.S. Department of the Interior found that “the statement lacks needed information and is deficient on numerous points essential to providing a clear understanding of the environmental impacts that would result from project implementation. Letter from Bruce Blanchard, U.S. Department of the Interior to Gerald R. Calhoun, SCS 1 (Oct. 27, 1981). The FWS charged the SCS with “circumventing the NEPA process” by selecting their plan “early in the planning phase, prior to the pre-draft and draft environmental statement.” The agency suggested that “a less damaging plan can be developed.” Memorandum from Director, FWS to Director, Office of Environmental Policy Review 1-2 (Sept. 30, 1982). Additionally, EPA concluded that the Draft EIS
aware Department of Natural Resources and Environmental Control and Kent and Queen Anne's Soil Conservation Districts and Boards of Commissioners. The EIS recommended channelization of approximately 97 miles on five stream systems in the Chester River Watershed.\textsuperscript{41} This would require the use of heavy construction equipment in sensitive areas over a seven-year period to level vegetated areas, ditch, and enlarge the five streams. The purpose of the Project, according to the SCS, is to "improve the agricultural economy" of the Eastern Shore.\textsuperscript{42} Channelization would improve drainage on 9,400 acres of currently wet cropland and 5,200 acres of interdependent non-wet cropland.\textsuperscript{43} Average crop yields in these wet soils would significantly increase, SCS hopes, due to improved drainage and reduced flooding.\textsuperscript{44} In addition to increasing crop production, SCS believes the Project would reduce road and bridge damage and benefit some rural homeowners with wet yards and poorly functioning septic systems.\textsuperscript{45}

In the same EIS in which SCS described in detail the benefits of the Project for the agricultural community, the agency discussed in only cursory fashion the Project's likely impact on the environment. The EIS did not recognize at all that the Project would affect the sensitive ecosystem on the Lower Chester River, the estuary into which the project waters feed, or the Chesapeake Bay.\textsuperscript{46} Instead, relying on a number of questionable assumptions, SCS concluded that the environmental impact of the Project would be minimal. For present purposes, four of these assumptions are noteworthy. First, SCS assumed that lateral drainage of adjacent wetlands caused by channel work would be limited to a distance of no more than 150 feet.\textsuperscript{47} Based on this assumption, SCS found that

\textsuperscript{41} EIS, \textit{supra} note 40, at 37. The stream systems for which channel work is proposed are the Cypress, Andover, Unicorn and Red Lion Branches and Pearl Creek.

\textsuperscript{42} \textit{Id.} at 1.

\textsuperscript{43} \textit{Id.} at 72. Other purposes include (1) the reduction of erosion on and sediment from the 14,600 acres of cropland; (2) improved management of 3,800 acres of forest land; and (3) improved wildlife habitat. \textit{Id.} at 1.

\textsuperscript{44} \textit{Id.} at 73.

\textsuperscript{45} \textit{Id.} at 74.

\textsuperscript{46} \textit{See infra} notes 58-60 and accompanying text.

\textsuperscript{47} EIS, \textit{supra} note 40, at 77.
only 126 acres of existing wetlands would be lost due to construction of the Project.\textsuperscript{48} Second, SCS assumed that the channelized streambanks would become stabilized within a year after the completion of construction, provided rainfall was not higher than normal.\textsuperscript{49} Therefore, it did not view sedimentation of the streams during and after construction as a significant environmental problem. Third, SCS assumed that the drainage of now undrained areas would decrease sedimentation and nutrient runoff, despite the increase in farming activities.\textsuperscript{50} Finally, SCS assumed that farmers in the project would voluntarily adopt "no-till" methods of farming, thereby significantly reducing cropland runoff.\textsuperscript{51}

Each of these assumptions was vigorously challenged by the various federal and state environmental agencies which commented on the EIS.\textsuperscript{52} For example, the agencies contended that lateral drainage of adjacent wetlands caused by the channel work could extend significantly more than the 150 feet assumed by SCS. As EPA concluded, "[s]ignificantly more acreage of wetlands may therefore be impacted than estimated by SCS."\textsuperscript{53} In fact, FWS informed SCS that over 3,000 acres of wetlands could be affected by the Project, far more than the 127 acres of affected wetlands identified in the EIS.\textsuperscript{54} Similarly, the agencies noted that there is no evidence to suggest that farmers will switch to the no-till method.\textsuperscript{55}

\textsuperscript{48} Id. at 81.
\textsuperscript{49} Id. at 75. The SCS stated "Higher than normal rainfall during the first year after construction may lengthen the stabilization period, although complete stabilization should take place within three years." This assumption is contrary to a Maryland study which concluded that the time it takes a channelized stream to restabilize cannot be readily determined, but "is clearly greater than three years." H. Speir, D. Weinrich, and W.R. Carter, Fisheries Administration, Maryland Department of Natural Resources, Evaluation of the Effects of Channelization on Small Coastal Streams of Maryland (1976).
\textsuperscript{50} EIS, supra note 40, at 78.
\textsuperscript{51} Id. at 99.
\textsuperscript{52} The SCS generally ignored the criticism of the environmental agencies on the Draft EIS. For example, the U.S. Department of the Interior complained that SCS's responses to its comments on the draft EIS were "for the most part, vague and general in nature with few specific facts to back up the response." Letter from U.S. Department of Interior to SCS (Aug. 24, 1982). The statement of the Maryland Department of State Planning was even more pointed. The Department complained that in many instances the state and federal agencies' comments were ignored and in others SCS's response was "either irrelevant or misleading." Letter from Maryland Department of State Planning to SCS (May 10, 1983).
\textsuperscript{53} Letter from Thomas P. Eichler, EPA, to Gerald C. Brown, U.S. Army Corps of Engineers (Feb. 22, 1984).
\textsuperscript{54} Letter from Glenn Kinser, FWS, to David Carpenter, SCS (Nov. 16, 1982).
\textsuperscript{55} See, e.g., Letter from Bruce Blanchard, U.S. Department of the Interior to Gerald R. Calhoun, SCS 1 (Aug. 24, 1982).
even if this method were practical on the flat terrain of the Eastern Shore. Further, FWS questioned the assumption that sedimentation would decrease from drainage of now undrained fields, producing a soil expert who claimed that if the flat, poorly drained, saturated soils of the Upper Chester River area were ditched for drainage, the erosion rate would increase.

In addition to questioning the particular assumptions relied upon by SCS, the environmental agencies criticized SCS for not recognizing the Project's potential to destroy wetlands and natural stream habitat and to affect the Chester River and the Chesapeake Bay. For example, EPA, in lengthy comments, has expressed serious concerns about the Project's potential "to exacerbate non-point source pollution (especially nutrients) loads to the Chester River and the Chesapeake Bay." EPA highlighted the need for "effective pollution control and habitat preservation during implementation of the watershed drainage plans" in light of "the importance and fragile nature of the Bay's resources." The many uncertainties which remain unresolved by the EIS have led the EPA to ask SCS to perform a "worst case analysis" of the impact of the Project on the Chester River and the Bay.

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56 See New York Times, Nov. 5, 1984, at D15, col. 5 ("many agronomists say the techniques are not desirable on flat terrain with soil that retains a lot of water... ").


58 Letter from Thomas R. Eichler, EPA, to Gerald C. Brown, U.S. Army Corps of Engineers 1 (Feb. 22, 1984). EPA noted that stream channelization in the Upper Chester River Watershed for agricultural drainage would deliver water downstream faster than natural cycles, thereby reducing the ability of floodplains wetlands to function as a filter to protect the Chester River and Chesapeake Bay from sediments and other harmful inputs such as herbicides and pesticides. Id., Appendix A at 3. Further, EPA warned that "[n]utrient loading from increased agricultural activity could potentially result in higher concentrations of nitrate and phosphorus being shunted downstream." Id., Appendix A at 5. Finally, the agency warned of the serious potential for the Project to cause destruction of the Chester River's submerged aquatic vegetation, which provides food and habitat for many species of birds and animals. Id., Appendix A at 7. See supra text accompanying notes 10-12.


60 See infra note 95. EPA has suggested that, at a minimum, the SCS consider the costs and benefits of the Project if farmers continue current cropping practices and do not voluntarily shift to no-till farming practices. Letter from John R. Pomponio, EPA, to Gerald R.
The environmental agencies further criticized the EIS for artificially restricting the alternatives considered.\textsuperscript{61} SCS did not formulate any non-structural measures for erosion control. Instead, the agency limited its analysis to a comparison of channelization and "no-action," discarding all other alternatives with the undocumented observation that "various measures were considered to address the agricultural drainage problems...[and] the only acceptable and feasible measure involved channel modification."\textsuperscript{62} The FWS and other agencies have charged the SCS with "circumventing the NEPA [National Environmental Policy Act] process" by selecting its plan prior to the preliminary and draft impact statements.\textsuperscript{63}

Despite the loud chorus of questions and criticisms from environmental agencies, SCS attempted to proceed with the Project as planned. In October 1983, the local sponsor for SCS requested from the Corps a permit, under section 404 of the Clean Water Act,\textsuperscript{64} to channelize approximately seven miles of the Red Lion Branch of the Upper Chester River.\textsuperscript{65} The permit was opposed by various environmental and civic organizations on the grounds that the Red Lion portion of the Project would increase sediment and nutrient loads in the Chester River and the Bay and that the cumulative environmental impacts of the Upper Chester River Project could not be determined based on the SCS's EIS.\textsuperscript{66} The Corps

\textsuperscript{61} See infra notes 239-41 and accompanying text.

\textsuperscript{62} EIS, supra note 40, at 29.

\textsuperscript{63} Memorandum from Director, FWS to Director, Office of Environmental Policy Review (Aug. 31, 1981). The agencies also stated their criticism of the cost-benefit analysis used in the EIS. With respect to the Final EIS, the Maryland Department of State Planning concluded: "We believe that the intent of NEPA has been violated, that the economic benefits have been overstated, and that the methodology of the economic analysis is inadequate." Department of State Planning, Evaluation of Upper Chester River Watershed Plan and Environmental Impact Statement 1 (transmitted May 10, 1983). The U.S. Department of the Interior concluded flatly that "[t]he project benefits [based on farm management changes to no-till practices which are left to the discretion of each farmer.] do not justify the adverse impacts to fish and wildlife resources that will occur." Letter from Bruce Blanchard, U.S. Department of the Interior, to Gerald R. Calhoun, SCS, (August 24, 1982).


\textsuperscript{65} The application was made to the Baltimore District of the Corps. On November 14, 1983, the District initiated a public review of the Red Lion permit application by issuing a public notice. A public hearing was held on the Project on December 19, 1983. The District issued the permit to the local sponsor, Queen Anne's County, Maryland, on April 6, 1984.

\textsuperscript{66} See, e.g., Letter from Richard Gardner, Chesapeake Bay Foundation to Gerald C. Brown, District Engineer, U.S. Army Corps of Engineers (Dec. 13, 1983).
agreed that "[t]he cumulative impacts of channelization are not well known."67 Though admitting that it could not assay the cumulative impacts of the Project, the Baltimore District nevertheless granted the permit application for the Red Lion Branch, finding that since the Red Lion portion of the Project involves the maintenance of previously channelized streams, "cumulative adverse impacts are not anticipated."68

It is unclear whether the Corps will require individual section 404 permits for the other parts of the Project. In June 1983, the Baltimore District Engineer requested from his superiors discretionary authority to require individual permits for each component of the Project.69 Prior to that request, channelization of certain streams with low flows was permitted without an individual permit under an existing "nationwide permit."70 The District Engineer recommended that the nationwide permit be revoked and that he be permitted discretion to require individual permits "[b]ecause the proposed channelization activities could significantly degrade water quality and the aquatic environment of the Chester River and the Chesapeake Bay."71

The District Engineer's request for discretionary authority was denied in June 1984. However, the Commander of the North Atlantic District of the Corps did impose conditions on the nation-

67 Brown, supra note 57, at 3.
68 Id. At the same time, Colonel Brown, District Engineer of the Baltimore District, informed the Maryland Secretary of Agriculture that he had uncovered three possible environmental problems associated with the Project:

"[1] [I]ncreases in nutrient and sediment loads to the Chesapeake Bay, exacerbating existing water quality problems; [2] the direct loss of wetlands within and immediately adjacent to existing streams, resulting in the destruction of productive fish and wildlife habitat; and [3] the secondary loss of wooded swamps, as a consequence of lowered water tables." Colonel Brown concluded: "It appears that the scientific evidence needed to judge the likelihood and severity of these problems is not presently available but can be obtained," and requested that the states of Maryland and Delaware join in the data collection program to resolve these questions. Letter from Gerald C. Brown, U.S. Army Corps of Engineers, to Wayne Cawley, Jr., Md. Secretary of Agriculture (April 6, 1984).
69 Memorandum from Baltimore District Engineer to Commander, North Atlantic (June 24, 1983).
70 33 C.F.R. § 330.4 (1984). A nationwide permit is a general permit issued by the Corps which authorizes a category of activities throughout the nation. It is designed to permit work to occur with little, if any, delay and paperwork, subject to certain conditions. The Corps's division engineers have the discretion, under specified situations, to override the nationwide permit coverage and required individual permits. See 33 C.F.R. § 330.1 (1984).
71 Memorandum from Baltimore District Engineer to Commander, North Atlantic 3 (June 24, 1983). The District Engineer renewed his request in April 1984, after a public hearing was held on revocation of the nationwide permit.
wide permit, which require project sponsors who plan to alter more than one acre of water to provide sufficient information to the District Engineer to allow him to determine whether the proposed work would cause more than minimal impacts or cumulative impacts. Under this procedure, the District Engineer would review each portion of the Project and determine whether discretionary authority to require an individual permit is required.\(^2\)

After SCS completed the EIS for the Project, there were at least four important developments which, under the regulations of the Council on Environmental Quality (CEQ), required SCS to prepare a Supplemental Environmental Impact Statement (SEIS).\(^7\) First, SCS proposed additional ditching and dredging in Delaware which would more than double the size of the Project originally considered in the EIS and would encourage additional ditching by private landowners.\(^7\) Second, as discussed above, the environmental agencies which commented on the Final EIS criticized the assumptions critical to SCS's conclusions, suggested further research is necessary to determine the environmental impacts of the Project, and complained that SCS failed to re-examine the assumptions in its Draft EIS in light of the views of its sister agencies.\(^7\) Third, the EPA Bay Study, published in September 1983 after the completion of the EIS for the Project, demonstrated that agricultural drainage is a major source of harmful sediment and nutrient loads into the Bay.\(^7\) Finally, in January 1984 the FWS determined that two rare

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\(^7\) U.S. Army Corps of Engineers, Notice of Final Action, Public Notice NABOP-RR 84-7001 (undated).

\(^2\) 40 C.F.R. § 1502.9(c) (1984). CEQ regulations require preparation of a SEIS whenever (i) the agency makes substantial changes in the proposed actions that are relevant to environmental concerns or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Id. See, e.g., Roosevelt Campobello International Park Commission v. EPA, 684 F.2d 1041, 1046 (1st Cir. 1982); Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1023-24 (9th Cir. 1980).

\(^7\) The additional work to be performed by Delaware Tax Ditches would channelize at least 123 additional miles of stream, and private landowners would be expected to construct further ditches to their own land in Maryland and Delaware. The original EIS considered only the impact of 97 miles of channel work, 52 of which were to be done in Delaware. The SCS's regulations recognize that where there is "a major change in the plan for the proposed action that significantly affects the quality of the human environment a new EIS is to be prepared." 7 C.F.R. § 650.13(f)(2) (1984).

\(^7\) These comments may properly be viewed as new data on the impacts of the project which require the preparation of a SEIS. See, e.g., Warm Springs Dam Task Force v. Gribble, 621 F.2d at 1024.

\(^7\) See supra notes 5-11 and accompanying text. The results of the EPA Study constitute significant new information which undercut the SCS's decision to refuse to consider the impacts of the Project on the Bay and, thus, justify preparation of a SEIS.
plant species occurring in the Upper Chester River watershed warranted a proposal for listing under the Endangered Species Act.\textsuperscript{77} 

In September 1984, in response to a request from a coalition of national, state and local civic and environmental organizations,\textsuperscript{78} SCS issued a notice of intent to prepare a SEIS for the Project. SCS acknowledged in the Notice of Intent that, since completion of the EIS, additional information had come to light which indicated that the Project might cause significant local impacts on the environment.\textsuperscript{79} As a result of these impacts, the SCS determined that the Project merited the preparation and review of a supplemental environmental impact statement.\textsuperscript{80} Subsequently, SCS announced that it will not proceed with any portion of the Project, including the Red Lion Branch, until the SEIS is completed.\textsuperscript{81}

The authors hope that SCS will consider in its SEIS the serious criticisms of the environmental consequences of the Project leveled by its sister agencies and others. However, the past actions of SCS provide little cause for optimism, for the agency earlier disregarded such criticism of the Project. That the Project might proceed, despite the strong criticism of the environmental agencies, is a consequence of the limited role of these agencies in the regulatory framework in which SCS operates. A description of this regulatory framework follows.

\textsuperscript{77} Letter from Regional Director, FWS, to Gerald R. Calhoun, SCS (March 27, 1984). The plants are Canby's dropwart (Oxypolis canbyi) and Fimbristylis perpusilla. Since both of these plants are likely to be affected by the Project, a SEIS was required to inventory the two plant species to identify potential impacts on them, and to offer detailed measures to mitigate the destruction of these plants, if necessary.

\textsuperscript{78} The organizations are listed \textit{supra} at Authors' note **. The organizations contended that the CEQ regulations require preparation of the SEIS because the geographic scope for the Project had been substantially increased since the completion of the EIS in July 1982, and further because substantial new information about environmental concerns had come to light since completion of the EIS.

\textsuperscript{79} SCS, Notice of Intent to Prepare a Supplemental Environmental Impact Statement (Sept. 19, 1984).

\textsuperscript{80} Id.

\textsuperscript{81} The SCS is presently working with local sponsors of the Project, the environmental and civic organizations which requested the SEIS, and state and federal environmental agencies to determine the scope of the SEIS. Each of these groups and agencies is expected to participate with the SCS in a working group to review the progress of the SEIS. The civic and environmental groups have strongly urged the SCS to "not only address the impacts of other substantial additional work proposed since completion of the environmental impact statement for the project in July 1982, but also to evaluate the local and cumulative impacts of the entire Project" in light of the numerous questions which have been raised as to the adequacy of the 1982 EIS. Comments filed by Environmental Policy Institute \textit{et al.} 2 (Nov. 29, 1984).
II. FEDERAL ENVIRONMENTAL REGULATION OF AGRICULTURAL DRAINAGE PROJECTS

Under current law, SCS and the Corps are charged with primary responsibility to assess the environmental impact of an agricultural drainage project and to determine whether the project's benefits justify incurring its environmental and financial costs. The National Environmental Policy Act (NEPA) charges SCS with assessing the environmental impact of projects it funds. The Corps is vested with authority to grant or deny a permit for such a project under section 404 of FWPCA, which regulates the discharge of dredge or fill materials into the nation's waters.

In this context of regulating the discharge of dredge or fill materials, the role of the environmental agencies, principally EPA and FWS, has been largely limited to commenting upon the actions of SCS and the Corps. However, EPA has set guidelines for section 404 permits, and also possesses the important authority to prohibit prospectively dredge and fill activities deemed to have an unacceptable adverse impact on wildlife or fish. While EPA has never exercised this authority, the Upper Chester River Project presents an appropriate case for its use.

A. The National Environmental Policy Act

Section 102(c) of NEPA requires that a federal agency prepare a detailed statement on the environmental impact of any "major Federal actions significantly affecting the quality of the human environment." The Supreme Court has observed that the requirement that an EIS be prepared "imposes upon agencies duties that are essentially procedural...to ensure a fully-informed and well-considered decision." The purposes of preparing an EIS are: to aid the responsible agency in deciding whether to proceed with the action, and, if so, selecting the best alternative; to inform the public of the environmental consequences of the action; and to encourage participation by the public and other state and federal agencies.

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85 33 U.S.C. § 1344(c).
agencies in the analysis of the environmental impact of the action.88

Where more than one federal agency is involved in a particular action, CEQ regulations require that a "lead agency" prepare the EIS.89 Generally, interested agencies are to select a lead agency from among their numbers, taking into consideration factors such as the magnitude and duration of an agency's involvement in the action, whether the agency possesses authority to approve or disapprove the action, and the agency's expertise on the environmental consequences of the action.89 SCS regulations broadly require that "SCS is to be the lead agency for actions under programs it administers."90 The role of SCS as lead agency for the Upper Chester River Project seems appropriate, as SCS is responsible for initiating, financing, completing, and maintaining the Project.91

Unfortunately, as indicated above, SCS has been unresponsive to the environmental concerns raised by its sister agencies with respect to the Upper Chester River Project and to criticism by those agencies of significant assumptions made in its EIS for the Project.92 In addition, SCS failed to consider the Project's potential impact on the Bay,93 which is required as a form of worst case analysis.94 It did not adequately consider or address alternatives to the project, relying upon the mere assertion that "the only acceptable and feasible measures involved channel modification."95 Fur-

89 40 C.F.R. § 1501.5(c)(1984).
90 Id. If a lead agency cannot be selected by agreement, CEQ regulations direct that any agency or person may petition the CEQ to determine the appropriate agency. Id. at § 1501.5(e).
92 In Natural Resources Defense Council v. Callaway, 524 F.2d 79, 86 (2d Cir. 1975), the Navy was held the proper lead agency for the preparation of an EIS channel dredging project, although the Corps held ultimate authority to issue a permit, because the Navy was responsible for the initiation, financing, completion and maintenance of the project.
93 See supra notes 47-63 and accompanying text.
94 See supra text accompanying note 46.
95 CEQ regulations direct that where "there are gaps in relevant information or scientific uncertainty" concerning the adverse impact of an action, and the agency proceeds with the action despite that uncertainty, "it shall include a worst case analysis and an indication of the probability or improbability of [the] occurrence" of the adverse impact. 40 C.F.R. § 1502.22(b) (1984). See Sierra Club v. Sigler, 695 F.2d 957 (5th Cir. 1983). CEQ regulations also require that if the overall costs of obtaining information essential to resolve the uncertainty are not exorbitant, that information shall be obtained and incorporated in the EIS. 40 C.F.R. § 1502.22(a) (1984).
96 See supra note 62 and accompanying text. This assertion does not fulfill the require-
ther, in its analysis of the Project, SCS initially refused to consider the cumulative impact of private fieldwork and channelization to be done in the area, as federal law requires.\footnote{7}

B. The Authority of the Corps Under Section 404 of the Federal Water Pollution Control Act

Principal authority to regulate agricultural non-point source water pollution is vested in the Corps by section 404 of FWPCA,\footnote{88} which requires that dischargers obtain from the Corps a permit before discharging any dredged or fill material into United States navigable waters.\footnote{99} Agricultural drainage projects, such as the Up-

\footnote{7 CEQ regulations require preparation of a single EIS for "[c]umulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(2)(1984). In addition, a single EIS is required for "[s]imilar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography." Id. at § 1508.25(a)(3).

Thus, the CEQ regulations compel analysis in a single EIS of the cumulative impact of all public and private channelization proposed for the Chester River Watershed because of the cumulatively significant impact all segments of the Project will have on the Bay and because of the similarity in the work to be done throughout the Project area.

\footnote{88 The Corps is vested with permitting authority under section 404 largely by historical coincidence. The Corps has long had authority, pursuant to section 10 of the Rivers and Harbors Act of 1899, to issue permits for dredging or filling in navigable United States waters as an incident to its primary function of aiding navigation. Traditionally, the Corps considered only the impact on navigation of regulated activities; however, in 1968 the Corps broadened the factors to be considered in permit issuance by regulation to include environmental factors. These regulations were upheld in Zabel v. Tabb, 430 F.2d 199, 213-14 (5th Cir. 1970), cert. denied, 401 U.S. 910 (1970). The development of the Corps authority under section 10 is explored in Barker, Sections 9 and 10 of the Rivers and Harbors Act of 1899: Potent Tools for Environmental Protection, 6 Ecology L.Q. 109 (1976). By including section 404 in FWPCA, Congress determined that the Corps should be allowed to continue to exercise authority over the discharge of dredged and fill material into United States waters. See 118 Cong. Rec. 33,699 (1972). Section 404 was added by the initiative of the House; the Senate had sought to vest the EPA with authority to regulate such discharges. See 117 Cong. Rec. 38,852-57 (1971). (Sen. Muskie,explains genesis of section 404); S. Rep. No. 414, 92d Cong., 1st Sess. 92 (1971).

\footnote{99 "Navigable waters" is defined broadly to include any waters Congress might regulate under the Commerce Clause of the Constitution. 33 C.F.R. § Part 329 (1984). In Natural Resources Defense Council, Inv. v. Callaway, 392 F. Supp. 685, 686 (D.D.C. 1975), an earlier regulation by the Corps adopting a more restrictive definition of navigable waters was invalidated and the Corps was directed to exert jurisdiction to the limit of federal authority. The

per Chester River Project, require a section 404 permit (unless they may be brought within one of several exceptions to section 404) because channelization involves the discharge of fill material in the construction of stream banks,\textsuperscript{100} and the discharge of material dredged from streams and channels into surrounding wetlands.\textsuperscript{101}

If a permit is required, it is sought from the local Corps District Engineer.\textsuperscript{102} Upon receipt of a permit application, the District Engineer notifies interested parties,\textsuperscript{103} receives public comments,\textsuperscript{104} obtains water quality certification from the state, if that is required,\textsuperscript{105} prepares an environmental assessment or EIS,\textsuperscript{106} holds a public hearing of the permit application if one is requested and warranted,\textsuperscript{107} and then determines whether to issue or deny the permit and any appropriate conditions to the permit. A permit will be issued only if the District Engineer determines it to be in the public interest, which, under Corps regulations, requires the Corps to determine that the benefits of the proposed action outweigh its "reasonably foreseeable detriments."\textsuperscript{108} In addition, the District authority of the Corps under section 404 extends to wetlands, which are defined as areas inundated with water which support a predominance of vegetation adapted for saturated soil conditions. 33 C.F.R. §§ 323.2(a), (c). See Avoyelles Sportsmen's League v. Marsh, 715 F.2d 897, 911-13 (5th Cir. 1983).

In a recent decision the Sixth Circuit apparently restricted the Corps's wetlands jurisdiction, holding that dredge and fill activities on land not frequently flooded was outside the scope of the Corps's authority. United States v. Riverside Bayview Homes, Inc., 729 F.2d 391 (6th Cir. 1984). This decision has come under substantial criticism, see Jackson and Armitage, United States v. Riverside Bayview Homes: A Questionable Interpretation of § 404, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 10366 (1984), and the Supreme Court recently granted the petition of the United States for certiorari. No. 84-701, 53 U.S.L.W. 3597 (Feb. 19, 1985).

\textsuperscript{100} "Fill material" is material introduced to a stream to replace an aquatic area with dry land or to change the bottom elevation of a waterbody. 33 C.F.R. § 323.2(k) (1984).

\textsuperscript{101} See Avoyelles Sportsmen's League v. Marsh, 715 F.2d 897, 922-25 (5th Cir. 1983).

\textsuperscript{102} 33 C.F.R. §§ 325.1(c), 8(b) (1984).

\textsuperscript{103} Id. at § 325.2(a)(2).

\textsuperscript{104} Id. at § 325.2(a)(3).

\textsuperscript{105} Id. at § 325.2(b)(1).

\textsuperscript{106} Id. at § 325.2(a)(4). The District Engineer may rely, as he did with respect to the Red Lion permit, upon an EIS prepared by another federal agency for the proposed action. 40 C.F.R. § 1506.3 (1984). The EIS must comply fully with NEPA. Sierra Club v. United States Army Corps of Engineers, 701 F.2d 1011, 1029-31 (2d Cir. 1983).


\textsuperscript{108} Id. at § 320.4(a). The regulation states:

(a) Public interest review. (1) The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful
Engineer must determine that the permit is consistent with EPA guidelines. The action of the District Engineer generally is not subject to review within the Corps, although the EPA has limited authority to review and veto a permit decision. Judicial review of the decision of the Corps is available under the Administrative Procedures Act.

As discussed above, the Corps has granted only one permit for the Upper Chester River Project for channelization of the Red Lion branch. This action is open to significant criticism. The Corps granted the permit on the basis of the environmental analysis contained in the SCS's EIS, the conclusions of which, by the Corps' own admission, are a matter of serious uncertainty. Fur-
thermore, by granting the Red Lion permit without undertaking a full analysis of the cumulative impact of Red Lion with the remainder of the Project, the Corps violated EPA guidelines to which it must adhere. Rather than properly attempting to ascertain the cumulative impact of the entire project, the Corps simply concluded that "[the] cumulative impacts of channelization are not well known."116

Apart from these immediate issues, the institutional capacity of the Corps to evaluate adequately environmental concerns under section 404 application procedures is subject to question.117 The Corps has often been criticized for insensitivity to environmental concerns,118 a record most recently exemplified by the Corps's actions concerning the Westway Project in New York. There the Corps disregarded criticism by FWS of the Westway Project which indicated the project would harm striped bass in the Hudson, an action ultimately held to be arbitrary and capricious upon judicial review.119 Despite EPA's and FWS's continued criticism of the absence of reliable information upon which to base its findings has been held to be arbitrary and capricious. Sierra Club v. United States Army Corps of Engineers, 701 F.2d 1011, 1031-33 (2d Cir. 1983).

116 EPA guidelines require that the Corps consider "cumulative impacts...that are attributable to the collective effect of a number of individual discharges of dredged or fill material." 40 C.F.R. § 230.11(g)(1)(1984). The guidelines further require that the "[c]umulative effects attributable to the discharge of dredged or fill material in waters of the United States should be predicted to the extent reasonable and practical." Id. at § 230.11(g)(2).

CEQ regulations require consideration of the cumulative impacts of the proposed action with other similar actions in preparing an EIS. See supra note 97. Given the inadequacy of the SCS EIS in this regard, the Corps's reliance on that EIS in the grant of the Red Lion permit violated NEPA. Cf. Sierra Club v. United States Army Corps of Engineers, 701 F.2d 1011, 1029-31 (2d Cir. 1983) (Corps' reliance on inadequate EIS prepared by Federal Highway Administration violated NEPA).

117 In the debates over section 404 Senator Muskie warned that the Corps might not be well-suited for environmental decision-making: "The Corps of Engineers, a mission-oriented agency, is not equipped to evaluate the environmental impact of these dredging activities. . . . We have found — and the hearings of our committee are replete with the evidence — that mission-oriented agencies whose mission is something other than concern for the environment simply do not adequately protect environmental values." 117 Cong. Rec. 38854, 38855 (Nov. 2, 1971).

118 A sampling of recent commentary to this effect includes: Muddying the Waters, 16 Oceans 63 (1983); Wiping Out the Wetlands, 172 Outdoor Life 12 (1983); Field & Stream Annual Dumb-Dumb Award, 87 Field & Stream 33 (1983); Rotten To The Corps, 87 Field & Stream 85 (1982).

119 Sierra Club v. United States Army Corps of Engineers, 701 F.2d 1011, 1031-33 (2d Cir. 1983).
analysis of the Project's environmental impacts, the Corps recently granted a new permit. Nor is such environmental insensitivity unknown to the office of the Baltimore District Engineer, which possesses permitting authority for the Upper Chester River Project. In a recent impoundment project on the St. Mary's River in Maryland involving SCS, the Corps twice granted a permit over the objections of EPA, only to have the project forestalled by the institution by EPA of section 404(c) proceedings and the decision by SCS to prepare a supplemental environmental impact statement.

C. Role of the Environmental Agencies in the Review of Agricultural Drainage Projects

Federal and state environmental agencies have a multi-faceted role in the review of proposed SCS agricultural drainage projects. The agencies may comment on a draft EIS prepared by SCS, and SCS is required to incorporate or respond to those comments in the final EIS. The agencies may also comment on a section 404 permit application before the Corps, and the Corps has indicated that it gives substantial weight to their comments in assessing the environmental impact of a proposed action. In addition to this essentially advisory role in the decision-making process, EPA has authority to define guidelines for permit decisions made by the Corps and, although the power is rarely exercised, to veto permits deemed by EPA to be improvidently granted.

1. Participation in the Preparation of an EIS

(a) Commentary on EIS

Central to NEPA is the requirement that federal or state agencies with expert knowledge of the environmental consequences of a proposed action participate in the preparation of the EIS concerning that action. CEQ regulations implement this statutory man-

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The cited reports indicate that in both instances, the decision not to challenge the Corps's action was made at the upper levels of the agency, in opposition to the recommendation of the local office.


122 42 U.S.C. § 4332(2)(C) (1982). Copies of comments offered by agencies with such
date in three principal ways. First, the lead agency is required to invite the participation of "affected Federal, State and local agencies" in defining the scope of the EIS prior to its preparation. Second, the lead agency must submit the draft EIS for comments to federal agencies with legal jurisdiction, special expertise or authority to develop environmental standards with respect to any impact of the action. Finally, CEQ regulations require the agency to respond to these comments of its sister agencies, either by modifying its analysis, modifying the proposed action or explaining why the comments did not warrant such response.

CEQ regulations also vest the lead agency with discretion to designate other federal agencies as "cooperating agencies," which causes additional responsibilities to be imposed on each agency. Cooperating agencies must be brought into the NEPA process "at the earliest possible time," and the lead agency must "[u]se the environmental analysis and proposals of cooperating agencies. . .to the maximum extent possible consistent with its responsibility as lead agency."

The cooperating agency must prepare environmental analyses, if asked to do so by the lead agency, and in its comments to the draft EIS the cooperating agency must specify any additional information needed to analyze adequately the impact of a proposed action. Further, if the cooperating agency has jurisdiction to issue a permit for or otherwise authorize the proposed action, it must specify the conditions or mitigation measures upon which it would grant the permit.

These mechanisms have proven inadequate in the case of the
Upper Chester River Project for a variety of reasons. First, SCS failed to designate EPA and FWS as cooperating agencies, thereby avoiding the more strenuous requirement that an agency use the analysis and proposals of a cooperating agency "to the maximum extent possible." Further, while SCS solicited and responded to comments from EPA and FWS on the draft EIS, as is required, it did not modify its analysis in the final EIS to address those comments. SCS did not undertake further analysis to corroborate assumptions in the draft EIS that its sister agencies had disputed. Instead, simply noting the disagreement in the final EIS, the agency reasserted its belief that its original analysis supported the conclusions earlier reached. Thus, as the Maryland Department of State Planning noted, the final EIS suffered many of the same flaws and inadequacies as the draft EIS.

(b) Dispute Resolution

CEQ regulations provide for the referral to CEQ of inter-agency disagreements over the content of an EIS. Any federal agency commenting upon a draft EIS may refer a dispute to the CEQ, after it informs the lead agency in comments to the draft EIS that it intends to refer a disputed matter to CEQ if satisfactory resolution of the issue is not reached. If the CEQ determines the issue is one of "national importance," and if its finds the disagreement among the agencies is "irreconcilable," it will offer proposed findings and recommendations with respect to the issue on the basis of reports submitted by the interested agencies. These proposed findings and recommendations are then submitted to the President for his final action.

This mechanism was not utilized to resolve the SCS, EPA and FWS disputes over the Upper Chester River Watershed Project.

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132 See supra note 40.
133 See supra note 35.
136 Id. at § 1504.3(a).
137 Id. at § 1504.3(f)(4).
138 Id. at § 1504.3(f)(6). A public hearing may also be held to obtain additional information. Id. at § 1504.3(f)(7).
EIS. Instead, the local offices of the Regional Director of FWS and the State Conservationist of the SCS elevated the dispute to their respective national offices. The national offices resolved the dispute through a Memorandum of Understanding (MOU), which requires SCS to employ certain mitigation measures in the ditching and channelization to the extent such measures are feasible.

Use of this informal technique to resolve inter-agency disputes is inappropriate for two reasons. First, the MOU was executed subsequent to the publication of the final EIS, without any public explanation of why the mitigation measures were thought sufficient to ameliorate the concerns raised by the District Director of FWS. Indeed, the primary requirement of the MOU, that the SCS employ one-sided channelization where feasible, is of uncertain value as a means to protect wetlands and, arguably, is impractical throughout much of the Project area. Interagency disputes should be resolved on the public record with public participation, as is required under CEQ referral regulations, to ensure these and similar concerns are adequately addressed. Second, resolution of interagency disputes through elevation takes the issue out of local offices of interested agencies, which are more familiar with the action than their national counterparts, and, by so doing, invites compromises of a political nature. The absence of any public discussion of the reasons for the agreement reached exacerbates this concern.

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141 The CEQ referral mechanism is rarely utilized. For example, in 1981 CEQ reported there had been only 18 instances of referral from 1974 through 1981. CEQ, Environmental Quality 176-77 (1981). An issue may be referred to CEQ only if it is of “national importance.” Moreover, referral requires that the involved agencies air their disagreements at the highest levels of the government, an act of self-abnegation that upper level personnel in an agency may be loathe to undertake in support of their underlings.

142 “SCS and USFWS Agreement Relating to Upper Chester River Watershed” (Jan. 13, 1983). The Agreement provides, inter alia, for cooperation between SCS and FWS in identifying and maintaining wetlands; for the use of one-sided construction methods, where feasible; and for minimizing clearing and snagging of vegetation where work can be performed by small equipment or by hand.

143 One-sided channelization involves clearing only one side of the stream of trees and underbrush for access and then performing all dredging on or from that side.

144 One-sided channelization is impossible if a stream is too wide, but SCS and FWS made no effort to document whether stream width made one-sided channelization appropriate through the Project area. Further, there is no evidence to suggest that one-sided channelization reduces lateral drainage of wetlands.

Agricultural Drainage Programs

(c) Judicial Review of Failure To Consider Adequately Comments of Other Agencies

There is a significant and growing body of case law on inter-agency disputes over impact statements, illustrating that the breakdown of the "cooperativism" envisioned in CEQ's EIS regulations is not unique to the Upper Chester River Project. Courts are an effective check in more egregious cases; however, courts are generally unwilling to do more under NEPA than require an agency to disclose and respond to criticism of an EIS. Thus, if the lead agency notes and offers in the EIS a superficially plausible response to such criticism, litigation is unlikely to test effectively the adequacy of the impact statement.

An EIS will be held inadequate under NEPA where an agency has failed to seek comments from environmental agencies,¹⁴⁶ where the agency fails to report in an EIS comments from other agencies critical of its analysis,¹⁴⁷ or where the agency appears to have disregarded opposing views in bad faith.¹⁴⁸ In perhaps the strongest statement of the duty imposed on an agency to respond to criticism of an EIS by another agency, one court has said that such criticism "must be given careful consideration and cannot be ignored or overridden without what amounts to a showing of good cause,"¹⁴⁹ and another has held that an agency must provide "a good faith, reasoned analysis in response" to such comments.¹⁵⁰

If, however, an agency offers a superficially reasonable response to criticism of an EIS, courts generally are unwilling to look below the surface to investigate the technical or scientific merit of the

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¹⁴⁷ See, e.g., Committee for Nuclear Responsibility v. Seaborg, 463 F.2d 783, 787 (D.C. Cir. 1971).
¹⁴⁸ In Sierra Club v. United States Army Corps of Engineers, 701 F.2d 1011, 1030-31 (2d Cir. 1983), an EIS prepared by the Federal Highway Administration and relied upon by the Corps in granting a section 404 permit for the Westway Project was held inadequate because the agencies had falsely assumed that no striped bass inhabited the project area, purposefully disregarding compelling evidence to the contrary provided by FWS and EPA. A SEIS has now been prepared, and the Corps has granted a section 404 permit anew, despite the continued opposition of the EPA and FWS to the project. See New York Times, Jan. 25, 1985, at 5A, col. 4.
position taken in the EIS. Instead, it is a shibboleth in NEPA litigation that a court will not sit to resolve disputes among experts,\(^{161}\) and that the essentially procedural dictates of NEPA are satisfied so long as any such disagreements are thoroughly aired.\(^{162}\) Thus, the existence of disagreement among federal agencies as to the environmental consequences of an action will not invalidate an EIS.\(^{163}\) This restriction on the scope of judicial review over the adequacy of an EIS raises a virtually insurmountable barrier for a plaintiff who seeks to challenge an EIS. Such a barrier exists with the EIS for the Upper Chester River Project, as it responds facially to the criticism of other agencies or experts, but uses questionable scientific or technical assumptions.

2. Participation in a Section 404 Permit Proceeding

(a) Commentary upon a Permit Application

Section 404 does not require the Corps to solicit comments from other agencies on the environmental consequences of a proposed action.\(^{184}\) However, the Fish & Wildlife Coordination Act does impose a requirement on the Corps to solicit comments from FWS, as well as other state and federal fish and wildlife resources agencies.\(^{165}\) Under that Act, a federal agency undertaking a water project must consult with FWS, the National Marine Fisheries Service and competent state agencies\(^{165}\) to ensure that "equal consideration" is given to fish and wildlife in undertaking the project.\(^{167}\) Regulations recently promulgated by the Corps require that "full consideration" be given to the comments of these agencies.\(^{168}\)

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\(^{162}\) See, e.g., Committee for Nuclear Responsibility v. Seaborg, 463 F.2d 783, 787 (D.C. Cir. 1971).


\(^{164}\) If the Corps must prepare an EIS concerning the proposed permit, it will be required by NEPA and the CEQ regulations to seek and consider the views of other federal agencies. Section 404(m) contemplates that FWS will submit comments upon permit applications by imposing a time limit for such comments. 33 U.S.C. § 1344(m) (1982).


\(^{166}\) Id. at § 662(a).

\(^{167}\) Id. at § 661.

\(^{168}\) 33 C.F.R. § 320.4(c) (1984), amended by 49 Fed. Reg. 39,478, 39,482 (Oct. 5, 1984). The regulations previously required that "great weight" be given to their views. 33 C.F.R. §
Although this mechanism has not been tested in the Upper Chester River Project, it is hoped that the Corps would defer to any comments submitted by FWS or other resource agencies with respect to the Project. However, as noted previously, the Corps has a mixed record on environmental issues in the administration of the section 404 program. Unfortunately, the Fish & Wildlife Coordination Act is an inadequate mechanism to ensure that the Corps adequately addresses concerns raised by resource agencies such as FWS.

Under the Fish & Wildlife Coordination Act, an effort is made to resolve interagency disputes through elevating the dispute from the level of the District Engineer to the Division or Chief Engineer. This mechanism is also of questionable value. Experience does not suggest that the Division of Chief Engineer will heed environmental concerns more than the District Engineer. Indeed, elevation of a decision seemingly invites greater consideration of political factors, and detracts from the consideration of difficult technical or scientific issues. Also, current regulations of the Corps make the elevation of disputes difficult. Further, the Fish

320.4(c) (1984). Apparently, the change was not intended to alter the significance of such comments, for the Corps explained that the change was merely done “to reflect the statutory language of the Fish & Wildlife Coordination Act...” 49 Fed. Reg. at 39,478.

158 The National Marine Fisheries Service submitted comments to the Red Lion permit application recommending that no work be done between February 15 and June 15 to protect fish spawning. This restriction was included in the permit granted by the Baltimore District Engineer. Gerald C. Brown, District Engineer, U.S. Army Corps of Engineers, “Environmental Assessment and Statement of Findings” (April 6, 1984).

159 See supra notes 117-118 and accompanying text.


161 For example, the Corps initially granted the Westway permit, see supra notes 119-20 and accompanying text, upon elevation to the Division Engineer, who made no effort to address the concern over striped bass identified by FWS. See Sierra Club v. Army Corps of Engineers, 701 F.2d 1011, 1031-33 (2d Cir. 1983).

162 For example in proceedings concerning a proposed landfill of wetlands on Mobile Bay in Alabama for the construction of a fiber recycling plant, the Mobile District Engineer initially denied a section 404 permit to the applicant, at the advice of EPA. The Governor of Alabama sought referral to the Division Engineer, raising the State’s concern over the jobs to be provided by the facility in a high unemployment area. The Division Engineer reversed the position of the District Engineer, granting the permit, without addressing any of the environmental concerns which led to the original denial of the permit. See Final Determination of the Administrator Concerning M.A. Norden Site Pursuant to section 404(c) of the Clean Water Act, 2-3 (June 15, 1984).

163 Prior to 1982, if the Corps District Engineer and the Regional Director of FWS disagreed as to the impact of the proposed action on fish or wildlife, a Memorandum of Agreement (MOA) between the Secretary of the Interior and the Corps required that the disagreement be referred to the national offices of the two agencies for resolution. See Blumm, The Clean Water Act’s Section 404 Program Enters Its Adolescence: An Institutional and
& Wildlife Coordination Act and the Corps's regulations do not require the Corps to defer to FWS or other competent agencies if there is a disagreement concerning the impact of proposed action upon fish and wildlife. Instead, it has been held that the Act requires only that the Corps give serious consideration to the view of the other agency.  

Apparent, the new regulations are not intended to require the Corps to pay any greater deference to the views of FWS or other agencies. As under NEPA, however, the duty to consider the comments of other agencies at least requires that the Corps actually consider, and not simply disregard, the comments of other agencies.

(i) Consideration of EPA comments.

Before EPA can exercise its authority under section 404(c) of FWPCA to veto a permit granted by the Corps, it must first advise the Corps regarding the section 404 permit application. In practice, EPA's power to veto permits granted by the Corps may en-
Agricultural Drainage Programs

sure that the Corps will consider any comments by the EPA upon the permit application. For example, the Regional Administrator for EPA Region III — who would ultimately be responsible for initiating veto proceedings for the Upper Chester River Project under section 404(c) submitted lengthy comments to the Red Lion permit application. These comments indicated that while the proposed channelization of the Red Lion branch posed little threat of environmental harm, EPA nevertheless had grave misgivings about the remainder of the Project. The District Engineer relied upon the EPA comments in granting the Red Lion permit, and in the same decision he noted that he found persuasive much of the EPA criticism of the remainder of the Project.

While this informal mechanism may possibly ensure that the Corps adequately addresses the concerns of EPA over the Upper Chester River Project, it is, at best, an imperfect means to that end. The Corps does not always respect the expertise of EPA, and may well grant a permit in the face of adverse commentary by the agency. If the Corps disregards EPA comments, it is unlikely that EPA will exercise its veto authority. In the history of the section 404 program, EPA has vetoed permits granted by the Corps in only two cases. Further, the process of informal commentary upon a permit application may not offer EPA a sufficient opportunity to undertake research and fact-finding necessary to determine

169 In comments to the section 404(c) regulations the EPA noted "[w]hile it is true that 404(c) has not been used yet, the fact that it has been available has had a deterrent effect." 49 Fed. Reg. 39, 478 (Oct. 5, 1984).

170 40 C.F.R. § 231.3(a) (1984).


172 See supra notes 67-68 and accompanying text.

173 The Corps recently granted a permit in the Westway case despite adverse commentary by both EPA and FWS, see supra notes 119-20 and accompanying text, and the Corps twice granted a permit for a water impoundment project on the St. Mary's River despite criticism by EPA. A MOU between the Corps and EPA and the Corps regulations provides for elevation of permit decisions in disputed cases to a Division Engineer of the Chief Engineer of the Corps. 33 C.F.R. §§ 325.8(b)(1), 325.8(c)(1) (1984). The Corps is not required to accept elevation. For example, in the St. Mary's River case the Corps agreed only to consider mitigation, although the dispute also involved the measure of the impact on wetlands. 48 Fed. Reg. 41811 (Sept. 19, 1983). Before EPA actually used its section 404(c) authority to veto a permit allowing discharges into wetlands near Mobile, Alabama, see infra notes 208-14 and accompanying text, the Corps had simply declined referral. 48 Fed. Reg. 51,732 (Nov. 10, 1983). Even if evaluation is allowed, it suffers from the same infirmities noted previously in the discussion of elevating disputes between the Corps and FWS. See supra notes 162-164 and accompanying text.

174 See infra notes 203-207 and accompanying text.
whether the environmental costs of granting the permit justify its opposition. EPA can gain time by initiating formal veto proceedings under section 404(c), but at the cost of substantial delay in the permit process. Bifurcation of permitting authority between EPA and the Corps creates inefficiency and uncertainty, with the attendant environmental and economic costs.178

(b) Adherence to EPA Guidelines

Section 404 endows EPA with significant authority over the terms and conditions of dredge and fill permits by requiring the Corps to grant permits “through the application of guidelines developed by the Administrator [of EPA], in conjunction with the Secretary [of the Army]. . . .”179 Pursuant to this grant of authority, EPA has promulgated detailed section 404(b)(1) guidelines.177 The guidelines impose significant constraints on dredge and fill permits not found in the Corps public interest review regulations.178 For example, the EPA guidelines require that no discharge be permitted “if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem,”179 or if the discharge “will cause or contribute to significant degradation” of water.180 Detailed factual findings are required regarding the potential direct and indirect effects of the discharge on the environment.181 The guidelines further provide detailed specifications for the analysis of particular types of discharges, aquatic environments, and uses of affected resources.182

Pursuant to a settlement agreement entered into in National Wildlife Federation v. Marsh,183 the Corps recently promulgated regulations requiring compliance with EPA guidelines in granting section 404 permits.184 This action was the culmination of a

178 See infra notes 228-29 and accompanying text.
179 33 U.S.C. § 1344(b) (1982). If the state assumes jurisdiction to issue permits under § 1344(h), it too must adhere to the section 404(b)(1) guidelines. Id. § 1344(h)(1)(A)(i).
180 Id. at § 230.10(c).
181 Id. at § 230.11.
182 Id. at subparts C-F.
184 33 C.F.R. § 323.6 (1984), amended by 49 Fed. Reg. 39,478, 39,482 (Oct. 5, 1984) (“[A] permit will be denied if the discharge that would be authorized by such permit would not
Agricultural Drainage Programs

lengthy political, administrative and judicial battle, involving, at various times, Congress, the Corps, EPA, the Office of Management and Budget (OMB), the Vice President's Task Force on Regulatory Relief and private environmental, agricultural and industrial groups.¹⁸⁵ In the early 1980's, the section 404 program and the role the EPA guidelines played in it received attention as a result of the President's effort to alleviate perceived regulatory inefficiencies. A dispute arose over the significance of the section 404 guidelines, with EPA arguing that the guidelines were mandatory, the Corps that the guidelines were merely advisory, and OMB that the guidelines were mandatory but should still leave the Corps with substantial discretion in passing upon particular permits. Following correspondence to the Task Force by EPA, the Corps, and OMB regarding this dispute, the Corps promulgated proposed regulations in 1983 which omitted any reference to the guidelines as a rule for decision-making in the granting of section 404 permits.¹⁸⁶ The settlement agreement invalidated those proposed regulations and resolved this dispute in favor of the EPA.¹⁸⁷

comply with the 404(b)(1) guidelines."). Section 404(b)(2) provides a limited exception pursuant to which the Corps might grant a permit otherwise prohibited under EPA guidelines "through the application additionally of the economic impact of the site on navigation and anchorage. 33 U.S.C. § 1344(B)(2) (1982). This exception is of little or no relevance to the Upper Chester River Project, for the exception applies only if navigation is at issue, a factor of little or no concern in the shallow headwaters of the Upper Chester River. Corps regulations recognize that the section 404(b)(2) exception allows only the “consideration of any economic impact on navigation or anchorage ....” 33 C.F.R. § 323.6(a) (1984), amended by 49 Fed. Reg. 39,478, 39,482.

Prior to the Marsh settlement, Corps regulations required only that the guidelines be considered as one of several factors in the balancing of the costs and benefits of the program in public interest review. See, e.g., 33 C.F.R. § 323.56 (1979). Even under the previous regulations several courts looked to the EPA guidelines as grounds for the denial or conditioning of section 404 permits. See, e.g., Buttrey v. United States, 690 F.2d 1170, 1180 (5th Cir. 1982), cert. denied, 461 U.S. 927 (1983); Shoreline Associates v. Marsh, 555 F. Supp. 169, 179-80 (D. Md. 1983), aff’d, 725 F.2d 677 (4th Cir. 1984); Hough v. Marsh, 557 F. Supp. 74, 83 (D. Mass. 1982). Another court, however, has slighted the guidelines, and in particular, the emphasis placed therein on the protection of wetlands, emphasizing, instead, the need to balance environmental and economic concerns. 1902 Atlantic Ltd. v. Hudson, 574 F. Supp. 1381, 1397 (E.D. Va. 1983).


¹⁸⁹ 48 Fed. Reg. 21,466-76 (May 12, 1983). Also in the quest for administrative efficiency, the Corps had earlier promulgated regulations which sought to streamline the permitting process and to expand the scope of the nationwide permits. 47 Fed. Reg. 31,794-834 (July 22, 1982).

¹⁹⁰ The current regulations represent the better reading of section 404 and its legislative history. Section 404(b)(1) literally requires the Corps to apply the guidelines developed by
The section 404(b)(1) guidelines provide an important means to ensure that the Corps address environmental concerns when passing upon dredge and fill permits. But because the guidelines cannot be self-executing, they do not address the fundamental issues of the allocation of decision-making authority. No matter how specific the guidelines, initial power still rests with the Corps to apply the standards in permit proceedings. And, unfortunately, history suggests that the Corps is not always inclined to give environmental values the primacy required under the guidelines. Given the Corps's long-standing resistance to submitting to the guidelines, one must be skeptical of whether the Corps will now seek to implement them vigorously. Thus, the continual review by EPA of permit decisions will remain an important factor to ensure that environmental concerns are adequately addressed.

3. Authority of EPA to Preempt or Veto the Grant of a Section 404 Permit

Under section 404(c) of FWPCA, EPA may prohibit, prospectively, the discharge of dredged or fill material at a particular site, or may veto a permit granted by the Corps, if EPA determines "that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas."\[188] Congress endowed EPA with this authority to ensure effective EPA oversight of the Corps' exercise of decision-making authority. EPA, which are the only formal basis upon which a disposal site may be specified. Other provisions assume the admonitory nature of the section 404(b)(1) guidelines. For example, section 404(b)(2) speaks of discharges otherwise "prohibited" by the guidelines in defining cases wherein the Corps might still grant a permit due to concerns of navigation. 33 U.S.C. § 1344(b)(2) (1982). This limited exception is discussed supra in note 184. Section 404(e)(1) directs that any general permits issued "shall be based on the guidelines described in subsection (b)(1)." Id. at § 1344(e)(1)(A). And, where the state assumes authority to issue permits, section 404(h) requires that any permits granted "assure compliance with . . .the guidelines established under subsection (b)(1) of this section." Id. at § 1344(h)(1)(A). Where a state assumes authority to issue permits the EPA may veto permits found to be outside the guidelines. Id. § 1344(j). That section 404(b)(1) speaks of "guidelines," rather than regulations or rules, does not imply that the section 404(b)(1) standards are any less admonitory, for other provisions of FWPCA which indisputably involve binding regulations similarly term those standards to be guidelines. See id. at §§ 1314(b) (effluent limitation guidelines), 1343(c) (ocean discharge guidelines). These arguments were made in a March 22, 1983 letter from John W. Hernandez, Jr., Acting Administrator, EPA, to Vice President George Bush, reprinted in 13 Env't Rep. (BNA) 2172 (Mar. 25, 1983).

of permitting authority. Although the EPA has promulgated detailed regulations governing the exercise of its section 404(c) authority, it has only sporadically exercised this authority. Indeed, the agency has never preemptorily declared that a discharge of dredge and fill materials is prohibited in a particular area, and only on two occasions has EPA vetoed a permit granted by the Corps.

A section 404(c) action may only concern the impact of dredge or fill activities at a designated site upon municipal water supplies, shellfish beds, fishery areas, wildlife and recreational areas. The review must be site-specific. Under the statute the action must address a "defined area" rather than particular types of activities or impacted resources. The review may only concern the resources designated by the statute; action may not be taken, for example, on the basis of water quality concerns alone. However, the only concern of a section 404(c) proceeding is the impact of the considered action on those designated resources; section 404(c) does not require, for example, the consideration of the economic cost of prohibiting or restricting dredge or fill activities at the designated site.

As originally proposed by the House, FWPCA contained no such provision. See, e.g., H.R. Rep. No. 911, 92nd Cong., 2d Sess. 52, 130 (Mar. 11, 1972) ("[u]nder section 404 the Secretary of the Army shall have final decision-making responsibility and he shall not abdicate that responsibility to any other agency.") Section 404(c) was added in the conference committee, presumably at the insistence of the Senate, which had sought to vest EPA with permitting authority. See 118 Cong. Rec. 32808 (Sept. 28, 1972) (Conference Report) Senator Muskie explained:

The Conferrees were uniquely aware of the process by which the dredge and fill permits are presently handled and did not wish to create a burdensome bureaucracy in light of the fact that a system to issue permits already existed. At the same time, the committee did not believe that there could be any justification for permitting the Secretary of the Army to make the determination as to the environmental implications of either the site to be selected or the specific spoil to be disposed of in site. Thus, the Conferrees agreed that the Administrator of the Environmental Protection Agency should have the veto over the selection of the site for dredged spoil disposal and over any specific spoil to be disposed of in any selected site. 118 Cong. Rec. 33699 (Oct. 4, 1972).

See infra notes 203-14 and accompanying text.

Thus, the EPA recognized in promulgating the regulations that the section 404(b) guidelines "are concerned with a greater range of resources than 404(c) is." 44 Fed. Reg. 58,076, 58,078 (Oct. 9, 1979).

In comments to the regulations the EPA noted:

Several commentators argued that any determination of 'unacceptability' should be
As procedural matter, a section 404(c) proceeding is initiated by the Regional Administrator of EPA with authority over the site. The Regional Administrator must notify the Corps District Engineer, affected landowners, and permit applicants of the proposed action. Before the Regional Administrator may take formal action, the Corps has an opportunity to persuade the Administrator that the proposed action is unnecessary to prevent unacceptable adverse effects. If the Corps fails to convince the Regional Administrator the action is unnecessary, he may issue a “notice of proposed determination,” following which the Corps may not issue a permit until EPA takes formal action. After public notice, comment, and, if interest warrants, a public hearing, the Regional Administrator’s recommended determination is then passed to the Administrator of EPA for final action. Before passing upon the recommended determination, the Administrator must consult with the Chief Engineer of the Corps, affected landowners, the State and the permit applicant. EPA has exercised its authority under section 404(c) sporadically. In 1980, EPA vetoed a permit granted for a landfill of wetlands in North Miami, Florida, and in 1984 EPA vetoed a permit allowing discharges into wetlands near Mobile, Alabama. Region III of the EPA, which has authority over the Chester River and the Chesapeake Bay, once initiated formal section 404(c) proceedings with respect to a drainage project on the St. Mary’s River in Maryland, although the issue was apparently resolved without further action by EPA. The only other reported section 404(c) proceed-
Agricultural Drainage Programs

ings involve two actions recently instituted concerning embank-ment projects proposed in South Carolina.207

The final determination of the Administrator of EPA with re-spect to the Norden site near Mobile, Alabama, illustrates several important aspects of a section 404(c) action.208 At issue was a pro-posed landfill of 25 acres of wetlands to support a fiber recycling plant. The EPA stated that it acted to protect the estuarine wet-land area because the wetland implicated protected resources in three different ways: it provided a habitat for wildlife;209 provided important detrital material to Mobile Bay, which supported fish and shellfish communities;210 and it served a filtration function, en-hancing water quality in Mobile Bay.211 Thus, the Norden decision illustrates the significance of wetlands protection in the section 404(c) scheme.

Further, the Norden decision demonstrated that economic con-cerns are, at best, of secondary relevance in a section 404(c) pro-ceeding. Following the section 404(b)(1) guidelines to prohibit the discharge, the Administrator concluded that there was a practica-ble alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem; specifically, feasible alter-native sites were available for the plant.212 Only in considering these alternatives did the Administrator address economic factors, and then simply to show the feasibility of the alternative sites.213 This action was consistent with both statutory provisions and EPA recognition that the inquiry in a section 404(c) proceeding focuses on the acceptability of the environmental impacts of a proposed action.214

(a) Potential Application of a 404(c) Proceeding to the Upper Chester River Project

A preemptory section 404(c) proceeding would be the ideal

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SCS of a SEIS. Id. at 41,811. There are unpublished reports that the project has now been abandoned.


208 See Final Determination of the Administrator Concerning M.A. Norden Site Pursuant to Section 404(c) of the Clean Water Act. (Jan. 15, 1984).

209 Id. at 7-8.

210 Id. at 5-6.

211 Id. at 8.

212 Id. at 16.

213 Id. at 10-14.

214 See supra note 195.
mechanism to ensure that environmental concerns raised by the Upper Chester River Project are addressed in a coherent manner. Plainly, action under section 404(c) by the Administrator of Region III is warranted. Both EPA and FWS have noted the potentially tragic consequences construction of the Chester River Project might have on fish, wildlife and shellfish, all of which are resources protected under section 404(c). If, as FWS has indicated, construction of the Project will destroy more than 3,000 acres of wetlands, the habitat or nesting ground for a variety of wildlife species will be lost. Further, the Project threatens to destroy an important spawning ground on the Chesapeake for rockfish, as well as the habitat and spawning ground for oysters, crabs, and numerous other species of fish. The Administrator of Region III has himself conceded that “an unacceptable adverse effect could result” from the Project. Under the regulations, this is the only prerequisite for a Regional Administrator to initiate a section 404(c) proceeding.

Uncertainty over the environmental consequences of the Project does not justify inaction on the part of the Regional Administrator. EPA regulations recognize that a section 404(c) proceeding may be the best forum for the resolution of such uncertainty. To initiate a proceeding, the Regional Administrator need only have “reason to believe” that unacceptable adverse effects “could result” from the contemplated action. The showing required to forestall the proceeding is that the threatened consequences will not occur. The Corps is apparently unable to make this showing, as its District Engineer has conceded that the information is insufficient to conclude that the Project will not cause significant harm to wetlands, the Bay, and, consequently, fish and wildlife. A section 404(c) proceeding would allow the Regional Administrator an opportunity to resolve any uncertainty, and so conclude whether an order

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218 See supra note 54 and accompanying text.
216 See supra notes 12-13, 36-39 and accompanying text.
217 See supra notes 58-59. An adverse effect is defined, under the regulations, as one “which is likely to result in...significant loss of or damage to fisheries, shellfishing, or wildlife habitat. ... ” 40 C.F.R. § 231.2(e) (1984).
218 Id. at § 231.3(a).
219 Id. EPA has noted that this formulation of the standard for the initiation of a section 404(c) proceeding is “appropriate for the early stage because the preliminary determination merely represents a judgment that the matter is worth looking into.” 44 Fed. Reg. 58,076, 58,078, (Oct. 9, 1979).
221 See supra notes 67-68 and accompanying text.
should issue prohibiting or limiting the Project because the channelization of the Upper Chester River "would be likely to have an unacceptable adverse effect."222

In comments filed on Red Lion,223 EPA advised the Corps to conduct a preemptory analysis of the Upper Chester River Project similar to that which EPA could undertake under section 404(c).224 For example, EPA advised that "[p]rior to the granting of subsequent ditch construction permits, the Corps should require a subwatershed monitoring program designed to demonstrate the effectiveness of pollution control measures now proposed or in place."225 Advising that a "resource agency wetland review" was necessary to determine potentially affected wetlands, EPA stated that no permits should be granted on sites where drainage was designed to convert wetlands to farmlands.226 EPA also proposed that studies be conducted to determine the lateral impact of drainage on wetlands, and that "[u]sing the results of such studies, areas of significant drainage potential should be designated. . . .Corps' permits for these areas should not be issued as their cumulative loss would entail significant degradation. . . ."227

Although this advice from EPA to the Corps is salutary, it fundamentally misconceives the respective roles of the two agencies. The Corps lacks statutory or regulatory authority to limit specific dredge or fill activities, absent a permit application for such activities.228 Section 404(c) empowers only EPA with this power to prohibit dredge or fill activities preemptorily.

Nor is it sensible to delay action under section 404(c) until completion by SCS of the SEIS or action by the Corps on individual permit applications. In promulgating the section 404(c) regulations, EPA rightly recognized that preemptory review is preferable for efficient, coherent decisionmaking.229 Efficient and coherent de-

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222 See supra notes 217-18 and accompanying text.
223 See supra notes 65-68 and accompanying text.
225 Id. at 3.
226 Id.
227 Id.
228 See supra notes 98-112 and accompanying text, describing the nature of the Corps' authority under section 404.
229 EPA noted:

EPA also feels that there are strong reasons for including this pre-permit authority in the present regulations. Such an approach will facilitate planning by developers and industry. It will eliminate frustrating situations in which someone spends time and
cision-making are especially desirable in a project such as this. First, comprehensive analysis of the cumulative impacts of all segments of the Project is necessary to understand the threatened destructive effect of the Project on the Chester River, the Bay and wetlands throughout the Project area. Second, immediate resolution of these issues is particularly important, as study of the Upper Chester River Project has gone on for more than fifteen years, with no final determination of the viability of the Project.230

There is yet an additional reason, peculiar to this region, for EPA to institute a section 404(c) proceeding. Because of its ongoing analysis of the Bay, the office of Region III of EPA is far better suited than the Corps or SCS to undertake an analysis of the environmental effects of the Upper Chester River Project.231 Through publication of the EPA Bay Study, and subsequent research, Region III of EPA has accumulated an enormous body of knowledge and expertise on problems currently confronting the Bay, particularly on the significance of agricultural drainage to the Bay. Because EPA is best situated to consider the impact of the Project in relation to other Bay activities and programs, action by EPA offers better informed decisionmaking.

Despite compelling reasons for preemptory action by EPA with respect to the Upper Chester River Project, it appears that the Regional Administrator cannot be compelled to act. Section 404(c) merely grants him the authority to act, but does not require that he “shall” act if circumstances warrant.232 EPA has interpreted section 404(c) as vesting discretionary authority with the Regional Administrator.233 Hence, if the Regional Administrator is to act, it

money developing a project for an inappropriate site and learns at an advanced stage that he must start over. In addition, advance prohibition will facilitate comprehensive rather than piecemeal protection of wetlands.


230 See, e.g., Transcript of Public Hearing on the Upper Chester River Watershed Project, p. 16-18 (noting that study of the Project has proceeded for 15 years and urging “that if new legitimate concerns have been raised, they be promptly addressed.”) (Statement of Senator William V. Roth, Jr.).

231 A recent MOU between the Corps and EPA states “COE (the Corps) recognizes the role of EPA as the lead agency for Federal participation in the CBP (Chesapeake Bay Project).” Corps-EPA Memorandum of Understanding, Nov. 21, 1984.

232 The regulations merely state that the Regional Administrator “may” act if circumstances warrant. 40 C.F.R. § 231.1(a) (1984).

233 In promulgating the regulations EPA noted:

Three commentators asked that the regulations be amended to provide a formal procedure for petitioning EPA to initiate 404(c) actions. Anyone has a right to contact EPA and suggest that it take action whether there is a formal procedure in the regu-
Agricultural Drainage Programs

must be on his own accord.

Cooperation Within the Chesapeake Bay Program

A web of MOUs, recently adopted between EPA, the Corps and SCS, among other agencies, should enhance the sensitivity shown by the Corps and SCS to the implications their actions carry for the Bay. The MOUs exhort the agencies to cooperate in preserving the Bay. More importantly, the MOUs impose upon the agencies an obligation to undertake research programs to determine and implement measures minimizing harm to the Bay from activities within their jurisdiction. Thus, in its MOU with EPA, SCS assumes the responsibility to aid EPA "in identifying priority problem areas. . .and consider those areas in making SCS program and project decisions;" to develop "best management practices" to control nonpoint source pollution and to aid local groups in implementing such practices; and, to provide training and a clearinghouse of information on land management practices. In addition, the MOUs provide for personnel and support to aid liaison between the agencies as well as joint participation of the agencies in the Chesapeake Bay Program.

The MOUs do not alter the respective statutory authority of the participating agencies. Nor do the MOUs provide interested agencies or outsiders with a legally enforceable right to compel compliance with their dictates. Rather, the impact of the MOUs will depend upon the manner of their implementation, and whether funding is made available for the research and educational programs contemplated therein. While a promising step, the MOUs' contribution to the effort to protect the Bay remains

lations. However, a formal procedure might foster a somewhat adversarial relationship, and might lead to the regional 404 staff being swamped with requests to protect valuable aquatic and wetland resources in advance of permit applications being filed. 44 Fed. Reg. 58,076, 58,081 (Oct. 9, 1979).

See, e.g., EPA-SCS MOU, November 21, 1984, Preamble (purpose is to "provide for a continuing cooperative working relationship"); Corps-EPA MOU, November 21, 1984 paragraph II-B ("EPA and [Corps] will cooperate in those areas where there is a mutual interest").

EPA-SCS MOU.

For example, EPA has agreed to provide SCS office space and support for the appointment of a representative at the EPA Annapolis office.

Corps-EPA MOU, paragraph II-A; EPA-SCS MOU, paragraph 10.

EPA-SCS MOU ("Nothing in this [MOU] alters the statutory authorities and responsibilities of [SCS and EPA]"); Corps-EPA MOU ("Nothing in this [MOU] alters the statutory authorities and responsibilities of the [Corps]").
III. Conclusion

The substantial contribution of agricultural practices to the deterioration of the Chesapeake Bay has been documented by the EPA Bay Study. Runoff from increasing levels of nutrients on farmland has led to declining water quality. This runoff has also contributed to the dramatic decline in the amount of submerged aquatic vegetation throughout the Bay available as an essential food source and habitat for waterfowl, blue crabs, and fish. Responding to the threat to the Bay’s survival caused by agricultural practices, EPA and the states in the Bay region are developing long-term strategies to reduce nutrient loads from farmland, including incentives to farmers to keep sensitive and marginal farmland out of production. These strategies to restore the Bay’s resources are jeopardized by SCS’s current practices. Agricultural drainage programs have destroyed thousands of acres of precious and irreplaceable wetlands in the Bay area. Yet, SCS continues to fund massive ditching and dredging projects which will increase the amount of usable farmland in sensitive areas such as the Chester River, and will lead to a further increase in nutrients from these newly drained fields. The history of the Upper Chester River Project illustrates how SCS has not adequately considered the adverse environmental consequences of its agricultural drainage projects in the Bay region. SCS has not heeded or explored the warnings of its sister environmental agencies as to the uncertain environmental consequences of proceeding with the Project. Nor has there been an effective mechanism for these agencies to force SCS to respond to their environmental concerns.

The shortcomings and failures of SCS in the Bay region suggest the need for a new approach in three areas. The first area is the consideration of alternatives to channelization projects which involve the destruction of wetlands and other important habitat and the clearing of trees, shrubs, grasses and other vegetation by heavy machinery over a multi-year period. The problems caused by channelization are increasingly evident. For example, EPA has recognized that widespread channelization of streams in the nation’s agricultural areas “is creating a problem of major proportion.”

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239 EPA, Environmental News 1 (Dec. 31, 1984). The EPA release further recognizes that “[w]hile channelization reduces the amount of flooding through the channelized reach, it
Similarly, the Tennessee Valley Authority has warned that channelization projects "may, individually or cumulatively, unacceptably damage naturally functioning aquatic ecosystems in the affected reaches." 240 Yet, SCS limited its evaluation of alternatives to the Upper Chester River Project to expensive channelization options, and did not consider less costly, environmentally preferable non-structural measures for erosion control. The sensitivity of the Bay's resources requires SCS to consider fully any non-structural alternatives, as well as innovative and less environmentally harmful technologies,241 before proceeding with destructive ditching and dredging projects in the Bay region.

A second area where a new approach is necessary is SCS's deference to the expertise of environmental agencies. As the Upper Chester River Project experience demonstrates, SCS may, with little risk of having its EIS rejected, address the comments of its sister environmental agencies in a cursory fashion and proceed without due regard for the environmental consequences of its projects. The voices of the agencies with environmental expertise, particularly EPA, which identified the dangers of agricultural pollution in its Bay Study, cannot remain muted if the Bay cleanup is to succeed. The supplemental EIS for the Upper Chester River Project, which is currently being prepared by SCS, provides the agency with a fresh chance to demonstrate that it is willing to address fully the environmental costs of its proposed project. If SCS continues to fall short of its responsibilities to address environmental concerns in the NEPA process and to defer to the expertise of environmental agencies, serious consideration should be given to making the recommendations of EPA and FWS binding on SCS, at least in the sensitive Bay region.

only magnifies the problem downstream." Id.

240 TVA Code, IX Stream Modification, Channelization, Structural Modification, and Renovation Water Subject to TVA Actions 1 (Oct. 18, 1983). TVA has adopted a policy "to avoid further channelization or environmentally degrading structural modification or renovation" unless "both significant public benefits are clearly established and environmental damage can be avoided or substantially mitigated." Id. at 2.

241 Specifically, SCS should consider techniques that are based on the principle of utilizing natural river processes to let the river restore and maintain its channel. This avoids the need to widen and deepen stream channels. For example, George Palmiter has developed methods of using a river's current rather than heavy machinery to move sediment deposits and using both dead and living trees, rather than engineered structures, to direct the river current. Under this method, live tree roots are used to stabilize banks. In contrast, channelization often requires the clear-cutting of all trees near the stream banks and the destruction of these habitats. See Why Streams Need Trees, supra note 15; Jordan, Working With the River, II Restoration & Management Notes 4 (1984).
Finally, a third and important area where a new approach is necessary is the use by EPA of its as yet untested preemptory authority under section 404(c) of FWPCA. This authority to prohibit, prospectively, the discharge of dredged or fill material at a particular site, is the ideal mechanism for guaranteeing that the environmental concerns raised in connection with the Upper Chester River Project are resolved in a coherent, fair, and timely manner. EPA has a unique role to play both in the Bay cleanup and in the Upper Chester River Project. EPA identified and documented the significant contribution of agricultural pollution to the deterioration of the Bay. It now has an unprecedented opportunity to address that problem and to resolve the growing conflict between agricultural drainage programs and the Chesapeake Bay cleanup.