AD-A043 538 NAVAL WAR COLL NEWPORT R I F/G 5/4
FEDERAL REGULATION OF THE NATION'S WETLANDS AN ANALYSIS OF GOVE--ETC(U)
JUN 77 R K TENER

UNCLASSIFIED NL

| OF |
AD
A043538

END
DATE
FILMED
9 -77
DDC

12

FEDERAL REGULATION OF THE NATION'S WETLANDS
AN ANALYSIS OF GOVERNMENT POLICY

By

ROBERT K. TENER
Colonel, U. S. Army

June 1977

59 p.

The views contained herein are those of the author, and publication of this research by the Center for Advanced Research, Naval War College, does not constitute endorsement thereof by the Naval War College, the Department of the Army, the Department of the Navy, or any other branch of the United States Government.

252 900

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* Federal Regulation of the Nation's Wetlands: An Analysis of Government Policy.		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Tener, Robert K., COL, USA		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Center for Advanced Research Naval War College Newport, Rhode Island 02840		12. REPORT DATE June 1977 13. NUMBER OF PAGES 58
14. MONITORING AGENCY NAME & ADDRESS*(if different from Controlling Office)* Naval War College Newport, Rhode Island 02840		15. SECURITY CLASS. *(of this report)* 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

A - Approved for Unlimited Distribution

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

ENVIRONMENTS; ENVIRONMENT POLLUTION; CONTROL; ENVIRONMENTAL MANAGEMENT; ARMY PERSONNEL AND MILITARY ENGINEERS; AQUATIC ORGANISMS; LAW AND WATER QUALITY; WATERWAYS.

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

The issue of federal regulation of the nation's wetlands is typified by complex, conflicting national interests. Government policy concerning wetlands regulation is still changing. This paper first analyzes how present policy evolved using Allison's models for viewing government actions. Than an extrapolation examines three alternatives for future wetlands Policy.

Existing organizational processes explain why Section 404 responsibility was assigned to the U.S. Army Corps of Engineers and why the 1974 policy emerged

(OVER)

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

as it did. The primary issues since 1975 have been whether federal regulation of wetlands is overregulation, and what the intent of the Congress is. Allison's Bureaucratic Politics model helps explain recent legislative actions and the Congress' trend to roll back the extent of federal wetlands regulatory authority.

An extrapolation of the analysis of present policy shows that, of three general alternatives available, the government is not likely to either (1) retain full federal regulatory authority indefinitely, or (2) delegate Section 404 responsibility to all the states soon. A feasible outcome of the government process, consistent with Allison's models, could be a policy to delegate wetlands regulatory authority on a state-by-state basis, subject to federal guidelines to be developed.

EXECUTIVE SUMMARY

The issue of federal regulation of the nation's wetlands is typified by complex, conflicting national interests. Government policy concerning wetlands regulation is still changing. This paper first analyzes how present policy was arrived at, using Allison's models for viewing government actions. Then an extrapolation examines three alternatives for future wetlands policy. Chapters I and II summarize events to date, and can be omitted by readers familiar with Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA) and related government events.

Existing organizational processes explain why Section 404 responsibility was assigned to the U.S. Army Corps of Engineers, and why the 1974 policy emerged as it did. The primary issues since 1975 have been whether federal regulation of wetlands is overregulation, and what the intent of the Congress is. Allison's Bureaucratic Politics model helps explain recent legislative actions and the Congress' trend to roll back the extent of federal wetlands regulatory authority.

An extrapolation of the analysis of present policy shows that, of three general alternatives available, the government is not likely to either (1) retain full federal regulatory authority indefinitely, or (2) delegate Section 404 responsibility to all the states soon. A feasible outcome of the government process, consistent with Allison's models, could be

(cont fr p ii)
~~a~~ a policy of delegating
a policy to delegate ~~wetlands~~ regulatory authority on a state-by-state basis, subject to federal guidelines, to be developed.

LIST OF FIGURES

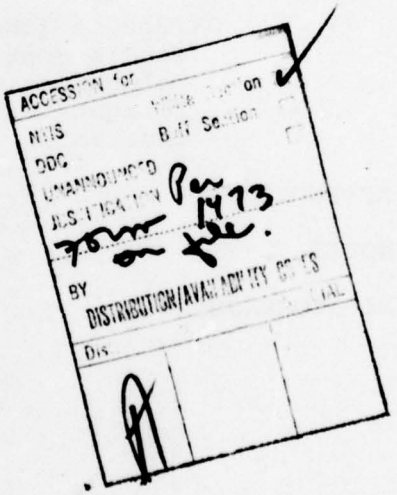


TABLE OF CONTENTS

FEDERAL REGULATION OF THE NATION'S WETLANDS

AN ANALYSIS OF GOVERNMENT POLICY

CHAPTER I

INTRODUCTION

There are few current issues with as diverse a set of complex and conflicting national interests and values as the issue of federal regulation of the nation's wetlands. Existing law on the subject centers on Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA), which became Public Law 92-500 and effectively established the U.S. Army Corps of Engineers as protector of wetlands. A diversity of viewpoints is evident from testimony before Congressional committees and statements on the floor of the House of Representatives in April, 1977:

> The '404' program should be allowed to proceed without further delay, and without weakening amendments to the federal law.[1]
>
> Section 404...is a prime illustration of the kind of Government overregulation and red tape politicians rail against.[2]
>
> Section 404...is basically working,...is not overly bureaucratic.[3]
>
> ...we do need to protect the farmers from the outrageous incursion of the Corps of Engineers.[4]

The essence of the conflict is federal overregulation <u>versus</u> the necessity to protect adequately a valuable national resource. A broad range of other issues are also involved, which bear on important values and priorities -- values

and priorities of groups of individuals, of communities, of States, of special interest groups, and of future generations of Americans.

Following a review of the applicable history, this paper presents a two-part analysis using the conceptual models for reviewing government decision-making proposed by Professor Graham T. Allison in his Essence of Decision. First, Allison's framework will be applied to analyze how we got where we are. Second, by examining the factors which will influence upcoming federal decisions on wetlands regulation, viewed through Allison's lenses, it is intended to chart a possible course along which future wetlands policy may be developed.

Wetlands: The Setting

The term wetlands is used to describe swamps, marshes, bogs, floodplains, and other frequently inundated areas, saline or freshwater. A valid criterion for designating a given area as a wetland is whether its vegetation depends on saturated soil conditions for its existence.

The primary issue is how best to prevent the pollution or loss of the nation's wetlands areas. Not at issue is the need to reduce the rate of loss of the nation's wetlands acreage. Numerous studies and reports have substantiated the irreplaceable value of coastal and freshwater wetlands in sustaining marine food chains, furnishing essential wildlife habitats, promoting water quality, and providing natural flood protection and water supply features.[5] Contrary to

the public beliefs of a generation ago that the most beneficial use of wetlands was to dredge and fill them for commercial or residential development, we now understand that these lands provide definite benefits to society, present and future. Scientists have estimated a total social value of $50,000 to $80,000 per acre for coastal wetlands,[6] and one acre of freshwater wetland may be worth up to $50,000,[7] based on replacing the functions it performs.

Yet the loss of wetlands acreage has proceeded at a disturbing rate. A 1955 inventory by the U.S. Fish and Wildlife Service showed that about 75 million acres (60%) remained of the 127 million acres of wetlands in America when it was first settled.[8] From 1955 to 1975, another six million acres (8%) of wetlands disappeared, most having been dredged and filled for industrial and commercial uses.[9] In California, only 445,000 acres (13%) remain of an estimated 3.5 million original acres of coastal and other wetlands.[10]

During these years, the evolution of national policies related to federal regulation of wetlands can be divided chronologically into three periods: the 1800's to the environmental renaissance of the 1960's (culminating in the National Environmental Policy Act (NEPA) in 1969), NEPA to the landmark NRDC v. Callaway case in 1975, and 1975 to the present.

CHAPTER II

THE HISTORY

Federal regulatory policy affecting wetlands had its earliest beginnings in laws which provided for navigability in the waterways of the United States. Federal regulation of the nation's water resources has evolved from the initial purpose of protecting navigation to objectives of protecting water quality and the environment. Prior to the FWPCA, federal regulatory jurisdiction over water resources was vested almost solely in the U.S. Army Corps of Engineers.

1800's to NEPA

The Act of 20 May 1824 created the first important federal development of waterways, authorizing improvement of the Ohio and Mississippi Rivers by "engineers in the public service"[1] by clearing the rivers of impediments to navigation. From the 1820's on, the Army Corps of Engineers studied, planned, and carried out river navigation improvement works, mainly dredging in the early years. Federal jurisdiction over the navigable waters of the United States stemmed from the federal government's constitutional power to regulate interstate and foreign commerce.[2]

The formal regulatory program for navigable waters dates from 1887, when the Supreme Court held that there was no U.S. common law that prohibited obstructions in the navigable waterways. As a result the Congress, in the River and Harbor Act of 1890, prohibited unlawful obstructions to the navigable

capacity of any water of the United States. This law was later combined with others concerning navigation in Sections 9 through 20 of the River and Harbor Appropriation Act of 1899.[3]

The 1899 River and Harbor Act remains today the principal statute providing for regulation of alterations or obstructions of navigable waters of the United States. Its intent was clearly the protection of navigation. Section 10 requires a permit from the Department of the Army for any works performed in a navigable water of the United States, to include structures as well as dredging and filling operations. Section 13, the Refuse Act, prohibits discharging refuse matter of any kind, except liquid sewage, into any navigable waters of the United States or their tributaries without a federal permit.[4]

Until 1968, the Corps of Engineers administered the 1899 act almost solely with regard to navigation, excluding environmental considerations when reviewing permit applications. This position was dictated by the purpose of the Act and was mandated by court decisions and an Attorney General's opinion over the years.[5]

> [T]he record demonstrates that...the Corps did attempt to enforce tentative measures to protect U.S. waters from pollution or exploitation, but the Executive and Judicial branches of the Federal Government absolutely forbade such measures under the 1899 River and Harbor Act.[6]

Conservationist movements emerged significantly in the U.S. early in the 20th century. Throughout the 1930's and

1940's gradually more federal interest was expressed in conservation, exemplified notably by the Fish and Wildlife Coordination Act in 1958. Nonetheless, economic growth and development became the national priorities and represented the values of the majority of American society through the 1950's.

It was not until the 1960's that Americans began to recognize the social costs of continued expansion and economic development at the expense of natural resources and the environment. Federal measures to prevent and control water pollution were enacted in 1956, 1961, 1965, 1966, and 1970. Environmental values were increasingly incorporated into government decision-making on behalf of the public interest. Federal administrative policy on regulation of water resources adapted to the provisions of the Fish and Wildlife Coordination Act and to the Congress' increasing awareness of environmental values. One notable result was a December 18, 1968 change in the Corps of Engineers regulations, which expanded the scope of review of applications for Section 10 permits:

> The decision as to whether a permit will be issued must rest on an evaluation of all relevant factors, including the effect of the proposed work on navigation, fish and wildlife, conservation, pollution, aesthetics, ecology, and the general public interest...[7]

The Congress, the courts, and the Executive soon formalized their approval of the Corps' new "public interest review."[8] The government had recognized and expressed a shift in national values and priorities.

A year later, on January 1, 1970, the National Environmental Policy Act of 1969 (NEPA) was enacted, a landmark statute which formalized the new national commitment to "prevent or eliminate damage to the environment."[9] The NEPA established the President's Council on Environmental Quality (CEQ) and initiated the requirement that federal agencies prepare an environmental impact statement (EIS) prior to undertaking any major federal action which would significantly affect the quality of the human environment. In 1971 CEQ published guidelines which stipulated that "federal actions" under NEPA included those involving permits.[10] A 1971 court case confirmed that NEPA applies to Federal permit activities and that courts could review permit cases to insure adherence to NEPA.[11]

Through NEPA then, the federal government expressed and implemented its intention that regulatory activities involving, among other things, waters of the United States were to include full consideration of environmental impacts. This was confirmed in the important Zabel v. Tabb case (1970), in which the court upheld the Corps' denial of a proposed dredge and fill activity solely on the grounds of environmental impact, with navigation not at issue.

NEPA to Callaway

The period 1970 to 1975 saw rapid and important changes in federal regulatory policy involving wetlands, primarily as a result of Congressional enactment of the Federal Water Pollution Control Amendments of 1972 (FWPCA) and ensuing

judicial and administrative decisions. Although passage of the FWPCA on October 18, 1972 was a seminal event, its ultimate and real effect on federal regulation over wetlands was not established until the landmark Natural Resources Defense Council v. Callaway case, decided 2 1/2 years later.

Bills were introduced in both the House and Senate in 1971 to revise existing water pollution control laws entirely. Following extensive and controversial committee and floor debates, and after 39 joint conference committee sessions, the FWPCA emerged as Public Law 92-500 on October 18, 1972. This comprehensive, complex law re-enacted and expanded essentially all previous legislation on water pollution control, and comprises five Titles, 70 numbered sections, and over 35,000 words. The operative section with regard to wetlands regulation is Section 404, which appears verbatim in Appendix A.

Section 404 provides that the Corps of Engineers may issue permits for the discharge of dredged or fill material into the "navigable waters" at specified disposal sites, subject to guidelines developed by the Environmental Protection Administration (EPA); EPA has "veto" authority to prohibit discharges. With respect to regulation of discharges into wetlands, passage of Section 404 generated several major issues of controversy, most of which remain unsettled up to the present time. The primary initial issues over Section 404 can be aggregated into three questions:

- What purpose was intended by the Congress in the FWPCA regarding wetlands preservation?
- What should be the extent of federal, as opposed to state, regulation in wetlands?
- What should be the geographic extent of the Corps' jurisdiction?

On April 3, 1974, new Corps of Engineers regulations implementing Section 404 were published in the Federal Register.[12] These regulations limited the applicability of Section 404 to the traditionally defined "navigable waters of the United States." This definition was considerably more restrictive than that used in other provisions of the FWPCA (particularly Section 402, which established the National Pollutant Discharge Elimination System), which applied to all "navigable waters," defined as "waters of the United States," and which include intrastate lakes, rivers, and streams utilized by interstate travelers for any purpose or for any interstate commerce or recreation purposes. The Corps had carefully considered the matter of extent of jurisdiction and the legislative history of the FWPCA before deciding on the limited definition of waters to be regulated.[13] Within four months the Corps position was challenged, in a suit brought against Secretary of the Army Callaway et. al. by the Natural Resources Defense Council, Inc. (NRDC) and the National Wildlife Federation. On March 25, 1975, District Judge Aubrey Robinson of the District Court for the District of Columbia held that the Congress had intended to exercise "federal jurisdiction over the nation's waters to the maximum extent

permissable under the Commerce Clause of the Constitution,"[14] and ordered publication of new regulations implementing Section 404 under the full regulatory mandate of the FWPCA.

The decision in NRDC v. Callaway began a new era in federal regulation of wetlands. Previously, regulation of discharges of dredge and fill had been limited to the traditionally defined "navigable waters," which generally did not include most wetlands. The new mandate resulted in the broadest implementation of federal regulatory authority over aspects of the economic livelihoods of private citizens, businesses and industries, and local communities, and over many affairs of the States and of hundreds of special interest groups nation-wide. Recognizing the far-reaching impact of its newly acquired authority, the Corps proceeded deliberately to prepare draft regulations and to expand its jurisdiction by phases over a two-year period, inviting and incorporating public and Congressional debate and comment throughout the process. The interim final regulations, published on July 25, 1975, defined "navigable waters" very broadly to include virtually all coastal and fresh water wetlands. The full definition appears in Appendix B. Thus the issue of geographic extent of the Corps' jurisdiction was settled, at least under the existing law as written in Section 404 and interpreted by the court and the Executive, and for the time being.

At the same time that the Congress and courts were generating changes in regulatory laws, the Corps of Engineers was modifying its regulations for the administration of these laws. The public interest review, instituted in 1968, was expanded in the Corps' 1974 regulations:

> (f) General Policies for Evaluating Permit Applications.
> (1) The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed structure or work and its intended use on the public interest. Evaluation of the probable impact that the proposed structure or work may have on the public interest requires a careful weighing of all those factors that become relevant in each particular case. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal and, if authorized, the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process...That decision should reflect the national concern for both protection and utilization of important resources. All factors that may be relevant to the proposal must be considered; among those factors are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood-damage prevention, land-use classifications, navigation, recreation, water supply, water quality, and, in general, the needs and welfare of the people. No permit will be granted unless its issuance is found to be in the public interest.[15] (emphasis added)

With specific regard to protecting wetlands, the 1974 regulations spoke out more strongly than any previous administrative policy:

> Unless the public interest requires otherwise, no permit shall be granted for work in wetlands identified as important...unless the District Engineer concludes, on the basis of the analysis required in [the public interest review] that the benefits of the proposed alteration outweigh the damage to the wetlands resource and

the proposed alteration is necessary to realize those benefits.

In evaluating whether a particular alteration of a wetland is necessary, the District Engineer shall primarily consider whether the proposed activity is dependent upon the wetland resources and environment and whether feasible alternative sites are available.[16]

The complete wetlands policy is reiterated in Appendix C.

The Intent of Congress in Section 404

Considerable literature and public statements have appeared since 1975 attempting, inconclusively, to establish the Congressional intent in Section 404 regarding wetlands protection and federal versus state regulatory responsibility. A recent, thorough and complete analysis by two legal authorities concludes that:[17]

- The Congress in the FWPCA intended to expand significantly the federal role in combatting water pollution through expanded jurisdiction.
- The Congress did not give adequate attention to defining the scope of expanded jurisdiction it desired.
- The legislative history lacks "an extended discussion of the substantial environmental, social, and economic impacts that would flow from the expansion of Corps jurisdiction."[18]
- The exceptional presence of Section 404 (which treats dredge and fill material uniquely from other pollutants) "indicates a navigational basis for its creation."[19]
- "[T]he structure of the FWPCA indicates either an intent to continue Corps jurisdiction only within the navigation servitude or a lack of Congressional foresight with regard to the role of the states in a pervasive regulatory program."[20]
- Subsequent to passage of the FWPCA, the Congress has clarified its desire that Section 404 be broadly interpreted and that the Corps be the administering agency.

Although "the objective of this [FWPCA] Act is to restore and maintain the chemical, physical, and biological integrity of the nation's water,"[21] nowhere in the legislative history or other literature is there clear evidence of a declared or implied, specific intent of the Congress that the FWPCA constitute a wetlands protection act. One concludes then that the effect of Section 404, in constituting a federal regulatory program to preserve wetlands from loss or destruction, was a "serendipitous result."[22]

1975 to the Present

In compliance with the court order, the Corps of Engineers published on May 6, 1975 new draft regulations to implement Section 404. After three months, during which the Corps had solicited public comment, the House Committee on Public Works and Transportation (Subcommittee on Water Resources) held three days of hearings to review the preparation of final regulations. The Subcommittee heard testimony from 38 witnesses and received over 70 separate statements, letters, and replies for the record.[23] Much of the public response reflected the positions of a number of national special interest groups. Basically, opinion consolidated under two general theses: one, that federal administrative regulations could be written so as to promulgate properly the established intent of the Congress:

> Well, what about the Section 404 framework? Does it provide an adequate basis for affording wetlands needed protection without unduly infringing on private property rights? We think the answer is a

> resounding yes....we believe it is possible for EPA and the Corps to develop an appropriately worded set of 404 regulations which protect wetlands and carry out the existing legislative intent without the need for further Congressional action at this time.[24]

And the other, that new legislation was necessary:

> ...we are going to have to go the legislative route to resolve the controversy which has arisen over Section 404...I have heard many Members of Congress say, 'Had I known this particular bill that I voted on 3 or 4 years ago was going to result in this type of regulation being issued by this particular Federal agency, I never would have voted for that law in the first place.'[25]

The first position was generally taken by the environmentalists, who favored a strong federal role in wetlands regulation. The second was supported by groups representing developmental and agricultural interests and generally by those opposed to federal overregulation. (These two countervailing positions still endure at present.) Testimony at the Subcommittee hearings revealed continued differences of opinion, expressed by several Members of Congress as well as witnesses, as to what the true intent of the Congress currently was regarding wetlands protection.

On July 25, 1975 the Corps published interim final regulations which exercised broad jurisdiction over dredge or fill discharges into the "navigable waters." Implementation was scheduled in three graduated phases, with the fullest extent of regulation to become effective on July 1, 1977.

From 1975 to the closing of the 94th Congress in January 1977, the Congress considered various legislative proposals

regarding Section 404. Two Senate bills, (The Dole Bill, S. 1843, and the Tower Bill, S. 1878), were introduced in June 1975, and three amendments to Section 404 were introduced in the House during 1976. The Wright Amendment passed the House by a 234-121 vote on June 3, 1976 and became Section 16 of H.R. 9560, which was passed by 339-5 the same day. The principal provisions of the Wright Amendment would:

- limit federal regulatory jurisdiction over discharge of dredge or fill material generally to the traditionally defined "navigable waters" and their adjacent wetlands (thus eliminating from federal regulation, among other waters, many inland streams and freshwater wetlands).
- provide for Corps regulation of waters outside its jurisdiction if the governor of the state and the Secretary of the Army agree to this.
- exempt from Section 404 normal farming, forestry and ranching activities, and farm ponds and irrigation ditches.
- allow specifically that the Corps may issue general permits for specified activities when in the public interest.
- exclude from the requirements of Section 404 any Federal projects for which an EIS covering the effects of discharges has been submitted to Congress.

In sum, the Wright Amendment would have significantly reduced federal regulatory jurisdiction over wetlands. The Natural Resources Defense Council estimated that the proposal would remove from federal jurisdiction "as much as 75 percent of the Nation's remaining 80 million acres of wetlands."[26]

In the Senate, hearings on Section 404 were held in July 1976 before the Committee on Public Works, during which 16

witnesses and over 170 additional statements were recorded.[27] There was considerable debate over the provisions of the Wright Amendment and the Cleveland-Harsha proposal of the House, which debate reflected the same general polarization of positions noted in the 1975 Subcommittee Hearings. Close federal regulation over a diminishing national resource was supported by the environmentalists, who urged retention of existing Section 404 provisions. On the other hand, relaxation of federal authority was supported by various state officials and special interest groups representing a wide range of farmers, foresters, and developers. The Wright Amendment and other water pollution control bills died with the closing of the 94th Congress.

On January 19, 1977, Senator Tower (Rep. - Texas) introduced a bill (S. 381) with provisions nearly identical to the Wright Amendment.[28] On April 5, 1977, the House passed, by a 361-43 vote, H.R. 3199, a comprehensive amendment to the 1977 FWPCA incorporating 22 sections. Section 16 of H.R. 3199 contained the same provisions as the Wright Amendment, and the Committee Report[29] and House floor debate[30] regarding Section 16 showed that the same agenda of issues were addressed by the House which had persisted since 1972: extent of federal jurisdiction over waterways, federal vs. state regulatory responsibility, and intent of the Congress with respect to wetlands protection. A joint House-Senate Conference committee deliberated over a bill which included the provisions of H.R. 3199 during eight meetings in March and April 1977, but finally set

aside debate on the FWPCA portions of the bill after becoming stalemated on Section 16, among other issues.

In his Environmental Message to the Congress on May 23, 1977, (excerpt at Appendix D) President Jimmy Carter advocated protecting wetlands and implementing Section 404, but "...in a way that avoids undue federal regulation."[31] On May 24 the President issued an Executive Order (Appendix E) which required that federal agencies take action to minimize wetlands loss in federally supported activities.

At present, federal policy regarding wetlands regulation remains as stated in Section 404 and as implemented in the Corps of Engineers regulation of July 1975. With new Senate hearings on Section 404 scheduled for July 1977, the primary issues remain on the Congressional "front burner" with more heated controversy waiting in the wings.

CHAPTER III

ANALYSIS ACCORDING TO ALLISON'S MODELS

It is useful to attempt to determine the reasons why federal wetlands policy developed as it did during 1972-1975, why the Corps of Engineers became the regulating agency, and what factors worked to mold federal wetlands policy during 1975-1977. A means of analyzing these events is to apply the conceptual models developed by Professor Graham T. Allison of Harvard University. Although not the only conceptual framework for analyzing government actions, Allison's models are particularly useful in this case because of the organizational and political conditions operative.

Allison's Models

In his book Essence of Decision: Explaining the Cuban Missile Crisis, Allison pointed out that government actions are usually analyzed as if the government behaves like a purposive, unitary entity. He argued that, to the contrary, outcomes of the governmental process are much more complex, and are better explained by examining the organizations that make up the government and the political processes that work within it. Allison developed three conceptual models by which government decision-making can be analyzed: Model I, the Rational Actor Model; Model II, The Organizational Process Model; and Model III, the Bureaucratic Politics Model. Major government decisions are in general characterized by elements of all three models, and viewing government action through each of the three lenses

can illuminate the real causes of that particular action. Figure 1 is a summary of the characteristics of each model.[1]

The Rational Actor model postulates government action as an analytical process by a rational entity, making deliberate, rational choices under a unitary set of goals, objectives, and options. Having established such a set of decision parameters, the government as Rational Actor selects the alternative which maximizes its rationally selected values.

The Organizational Process Model sees the government as a conglomerate of loosely allied organizations. Government action is an organizational output, influenced by the goals, structures and routines of the groups which make it up. Searches, and ranges of options, are constrained within the boundaries of existing organizational routines. An action today is possible only if it is but marginally different from actions allowed by yesterday's organizational routines and performance. "Model II's explanatory power is achieved by uncovering the organizational routines and repertoires that produced the outputs that comprise the [governmental] occurrence."[2]

The Bureaucratic Politics Model represents government action as a political resultant. The players - individuals or groups - operate from their respective positions ("where you stand depends on where you sit"), making judgments based on their own heirarchy of political values. Pulling and hauling is done among power positions, and when government actions occurs it is a resultant of bargaining among political players.

Summary Outline of Models and Concepts [1]

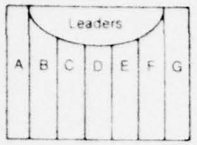
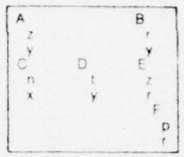
The Paradigm	Model I	Model II	Model III
	National government  Goals (objective function) Options Consequences Choice	National government  Organizations (A–G) Goals SOPs and programs	National government  Players in positions (A–F) Goals, interests, stakes, and stands (r–z) Power Action-channels
Basic unit of analysis	Governmental action as choice	Governmental action as organizational output	Governmental action as political resultant
Organizing concepts	National actor The problem Static selection Action as rational choice Goals and objectives Options Consequences Choice	Organizational actors (constellation of which is the government) Factored problems and fractionated power Parochial priorities and perceptions Action as organizational output Goals: constraints defining acceptable performance Sequential attention to goals Standard operating procedures Programs and repertoires Uncertainty avoidance (negotiated environment, standard scenario) Problem-directed search Organizational learning and change Central coordination and control Decisons of government leaders	Players in positions Parochial priorities and perceptions Goals and interests Stakes and stands Deadlines and faces of issues Power Action-channels Rules of the game Action as political resultant
Dominant inference pattern	Governmental action = choice with regard to objectives	Governmental action (in short run) = output largely determined by present SOPs and programs Governmental action (in longer run) = output importantly affected by organizational goals, SOPs, etc.	Governmental action = resultant of bargaining
General propositions	Substitution effect	Organizational implementation Organizational options Limited flexibility and incremental change Long-range planning Goals and tradeoffs Imperialism Options and organization Administrative feasibility Directed change	Political resultants Action and intention Problems and solutions Where you stand depends on where you sit Chiefs and Indians The 51–49 principle Inter- and intra-national relations Misperception, misexpectation, miscommunication, and reticence Styles of play

FIGURE 1

Rarely would any one of these three models alone explain the reasons for a given government action. Outcomes are generally characterized by some features of all three models. Other writers have used Allison's models to explain government actions in connection with the Navy's base realignments in New England in 1973[3] and with the Navy decision to procure the F-18 aircraft.[4]

Section 404 and the 1974 Regulations

Federal wetlands policy as it developed during 1972-1974 is described by Models I and II. The Congress appeared to act as a unitary Rational Actor in enacting Section 404 of the FWPCA. The Corps of Engineers inherited the task of regulator and decided on the provisions of their 1974 regulations in accordance with the Organizational Process model.

The FWPCA was enacted by the Congress "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters...it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985."[5] As a single Rational Actor would, the Congress sought to clean up the nation's waters by a broad range of means, to include regulating the discharge of dredged or fill material. The unitary goals were to eliminate pollution of "the navigable waters," with the broadest possible definition applied to "the navigable waters" to insure the maximum effects of achieving the goals. Although the original House and Senate versions of the act differed with respect to Section 404 provisions, the

conference committee agreed upon the final Section 404 language (Appendix A). Members of both Houses recognized that specific provisions for regulating dredged spoil, as differentiated from other polluting effluents, was needed to achieve the full rational intent of the act. Noteworthy, however, is the fact that the Congressional deliberations addressed water quality as the objective value, and did not expressly consider the idea of preservation of wetlands areas per se. No evidence is available to show how bureaucratic politics may have influenced the enactment of Section 404.

The assignment of responsibility for regulating discharges of dredge or fill was arrived at because of organizational processes in being. The Corps of Engineers had been responsible for regulating discharges into navigable waters under Section 10 and 13 for 72 years, and "[t]he conferees were uniquely aware of the process by which 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."[6] In 1972 some Members of Congress, particularly Senator Muskie (Dem. - Maine), Chairman of the Subcommittee on Air and Water Pollution, opposed the idea of the Corps as protectors of the environment because of the conflict with their mission as developers of the nation's waterways. The other proposal was that the EPA be responsible for regulating dredge and fill discharges. Section 404 ultimately provided EPA a "veto" authority to prohibit discharges of dredge or fill material,

but the Corps of Engineers was designated the regulating agency. The fact that the Corps had an organizational structure in being, with established routines, prevailed over the idea that the new task was antithetical to the Corps' historic mission.

The Corps' 1974 regulations applied Section 404 to the traditionally defined "navigable waters," as the Organizational Process model would predict. Although the Conference Report stated that "[t]he conferees fully intend that the term 'navigable waters' be given the broadest possible constitutional interpretation unencumbered by agency determinations,"[7] the Corps after deliberation decided to apply its newly acquired authority within the limits of its established organizational routine. The Corps had no desire to expand its authority or operating limits beyond those within which its traditional and existing routines operated. Further, it is inherent in a large bureaucratic organization - according to the Organizational Process Model and other organizational theories - that change occurs slowly and that resistance to change (especially in roles and missions) is a dominant influence in organizational behavior. The Corps of Engineers' decision to limit its interpretation of its Section 404 responsibilities was rational in the Corps' own view, and there were reasons which supported the stand taken by the Corps.[8] However, one can surmise that if some other agency - such as the EPA, for example - had inherited the dredge and fill regulatory function, the interpretation of Section 404's applicability might well have been broader at the outset than that adopted by the Corps.

As related previously, the NRDC v. Callaway decision reversed the situation, requiring the Corps to publish new regulations implementing Section 404 in a far broader extent of the nation's waters.

The 1975 Regulations

Organizational processes continued to dictate the formulation of federal wetlands policy during the preparation of the 1975 regulations on permits for dredge and fill in the nation's waters, but bureaucratic politics increasingly entered the picture. The Corps of Engineers imposed its newly increased authority in gradual, deliberate phases, guarding its organizational health by attempting to satisfy organizations and political actors on all sides of the issue. Public participation was invited by the Corps while preparing the new regulations and over 4500 comments were received and considered. Hearings before the House Subcommittee on Water Resources in July 1975 produced a wide range of testimony, illuminating the sharp difference of opinion over Congressional intent toward wetlands in Section 404 and highlighting the polarization of opinion. The Corps regulations, published as "interim final" on July 25, 1975, established a three-phase plan for gradually bringing under regulation the lesser waters, with headwaters of streams finally subject to permit under Phase III beginning July 1, 1977. These regulations did not satisfy the objectives of all the organizations whose operations would be affected, of course. But they did provide a framework, arrived at publicly, within which the Corps could carry out the law as interpreted by the court.

The Issues and Political Actors Emerge

During 1974-1975 the issues began to emerge over whether Section 404 was to be in fact a federal wetlands protection act, and where the various political factions were going to line up. The environmental groups and their supporters attributed to the 1972 FWPCA a wetlands protection role which Congress had not originally intended. The environmentalists' contentions were denied by several Members during the 1975 House subcommittee hearings.

The principal issue, which initiated considerable pulling and hauling between political actors, was whether federal regulation was federal overregulation. Special interest groups representing developers, foresters, and farmers opposed the federal regulatory role on the basis that it was overly bureaucratic and imposed new costs and restrictions on normal activities. Environmentalists cheered the new federal commitment to halt the destruction of valuable wetlands.

The question of state versus federal regulatory authority arose. The 1975 regulations provided for an active state role:

> We believe there is considerable merit in having the States become directly involved in the decision-making process to the maximum extent possible under the law.
>
> ...many states have existing permit programs to regulate the same types of activities that will be regulated through section 404 of the FWPCA by the Corps of Engineers. To the extent possible, it is our desire to support the state in its decision. Thus, where a state denies a permit, the Corps will not issue a section 404 permit. On the other hand, if a state issues a permit, the Corps

would not deny its permit unless there are overriding national factors of the public interest which dictate such action.[9]

Most states took a public position against federal regulation of section 404 activities, as would be expected. However, California's announced position, and that which was probably privately held by other state representatives, supported the federal role as permitting authority. The effect of this would, of course, be to relieve state administrators of the ticklish chore of adjudging permit applications where strong political pressures would weigh in the applicant's favor and strong public clamor would oppose approval.

Where the various political actors stood on the issue of Federal regulation under Section 404 was recorded in a compilation of responses to the 1975 interim final Corps regulations. For a period of 134 days following publication of the regulations, the Corps sought and recorded public response to the new regs. Figure 2 shows that, of the 2,084 responses received, 50% favored and 43% disapproved of Federal action.[10] More interesting, though, is a breakdown of who stood where among responding categories. Of categories with ten or more responses taking a position:

Favor Federal Action

Private individual (non-farmer)	686 to 137
Environmental groups	152 to 9

TOTAL PUBLIC RESPONSE TO SEC. 404, FWPCA, JULY 25, 1975 INTERIM FINAL REGULATION 10

Categories of respondents	Favors Federal action			No position stated			Disapproves Federal action			Subtotals		Grand total
	Written	Oral	Subtotal	Written	Oral	Subtotal	Written	Oral	Subtotal	Written	Oral	
1. Private individual (nonfarmer)	663	23	686	41	2	43	129	8	137	833	33	866
2. Private individual (farmer, rancher)	5	0	5	0	0	0	36	0	36	41	0	41
3. U.S. Senator	1	0	1	0	0	0	4	0	4	5	0	5
4. U.S. Congressman	1	1	2	1	1	2	3	2	10	10	4	14
5. Federal agency	2	4	6	3	0	3	4	0	4	0	4	13
6. Corps field office	0	0	0	6	0	6	0	0	0	6	0	6
7. Federal, other	1	1	2	3	0	3	2	0	2	6	1	7
8. Governor	2	0	2	0	0	0	17	5	22	19	5	24
9. State agency	24	2	26	7	2	9	61	22	83	92	26	118
10. Elected State official	1	0	1	2	2	4	14	6	20	17	8	25
11. State, other	3	0	3	7	1	8	6	0	8	16	1	17
12. City or county official	6	1	7	6	0	8	55	4	39	49	5	54
13. Port authority	6	0	6	1	0	1	1	2	3	8	2	10
14. Conservation district	24	2	26	4	1	5	101	19	129	120	22	151
15. Local government, other	9	0	9	3	0	3	16	5	51	58	5	63
16. Trade association	6	0	6	5	4	9	54	21	75	65	25	90
17. Environmental group	125	26	152	6	1	7	7	2	9	139	29	168
18. Chamber of commerce	2	0	2	0	0	0	7	0	7	0	0	9
19. Special interest group	61	6	67	9	1	10	69	6	75	139	13	152
20. Large corporation	10	0	10	16	1	17	95	15	110	121	16	137
21. Small business	13	0	13	5	1	6	60	2	62	78	3	81
22. Law firm	6	0	6	6	0	6	7	0	7	19	0	19
23. Petition	2	0	2	1	0	1	11	0	11	14	0	14
Total	974	66	1,040	134	17	151	774	119	893	1,882	202	2,084
Percentage			49.9			7.3			42.8			100.0

Note: This summary includes all testimony from public hearings and oral testimony from public meetings where it was specifically stated that it would become a part of the official public response record.

FIGURE 2

Disapproved Federal Action

Conservation district	129 to 26
Special interest group	75 to 67
Large corporation	110 to 10
State agency	83 to 26
Trade association	75 to 6
Small business	62 to 13
City or county official	55 to 7
Local government, other	51 to 9
Private individual (farmer, rancher)	36 to 5
Governor	22 to 2
Elected state official	20 to 1
Law firm	7 to 6
Petition	11 to 2
U.S. Congressmen	10 to 2
State, other	8 to 3

The political positions are well illustrated above: environmental groups and private citizens (many of whom certainly responded on behalf of environmental group initiatives) stood opposite all other political groups on the matter of Federal regulation of wetlands. The Government's actions through 1975 to retain the wetlands regulatory authority, viewed by the Bureaucratic Politics model, is a resultant of a single political position - that of the environmentalists - prevailing over a host of other political factions.

Another sensitive issue has emerged regarding whether the federal authority to protect water quality has in fact become a mechanism which legislates land use, with the connotation of federal land use control being politically onerous to most of the players. Court findings have established that denial of an application to develop a wetland is not generally a "taking" of that land. But those who oppose federal wetland regulation still elicit support for their claim that the government is improperly dictating land use. The crux of this issue is that wetlands possess characteristics of both land and water. Certain uses of privately owned land cannot in general be barred legally. But more often the aquatic definition of wetlands prevails, and waters of the nation are a public trust which cannot be "taken." In the absence of clear, detailed legislation, this issue will leave continued opportunities for various political actors to forward parochial arguments about land use control.

Legislative Actions, 1976-1977

The most significant government actions regarding Section 404 since publication of the 1975 regulations have been passage of the Wright Amendment by the House in June 1976 and failure of the Conference committee in April 1977 to agree on wetlands policy and H.R. 3199.

The concepts of the Bureaucratic Politics model, prevalent since late 1975 in describing government wetlands regulation

actions, provide a good explanation for passage of the Wright Amendment. Had it become law, that amendment would have limited considerably the extent of federal wetlands regulatory authority, as detailed in Chapter II. With the purpose of developing a comprehensive amendment to the 1977 FWPCA, the House Public Works Committee reported out a bill (H.R. 9560) which contained provisions (called the Breaux Amendment) to modify the federal role in wetlands regulation. The Wright Amendment to H.R. 9560 was a replacement for the Breaux Amendment. It was presented on the House floor on June 3, 1976 and, following several hours of debate (but no public hearings), was passed by a 234-121 vote. The central issue was federal overregulation, and floor debate indicated a prevailing rationale that, as a result of NRDC v. Callaway and the broad implementing regulations, federal wetlands regulatory authority had been extended too far and without Congressional intent. But the urgings of the special interest groups opposing federal regulation had in fact been the politically influential factor. This can be realized by examining the collective voting power of the various political groupings which disapproved of federal action (p. 28). So the pulling and hauling in June 1976 yielded a resultant opposite that of 1975, when the judicial and administrative arms had controlled the outcome. Now the environmental interests were overtaken by those opposing federal regulation and wetlands protection.

There is consistency also between this outcome and the Organizational Process model. In the past, the courts have consistently favored the environmental side of issues more than the House of Representatives has. The House action approving the Wright Amendment, relative to the position taken by the judiciary, is as the Organizational Process model would predict.

There were many, involved reasons for the failure of the Senate and House conferees in April 1977 to agree on H.R. 3199, not all having to do with wetlands policy and the Wright Amendment provisions of the bill. The conferees were faced with numerous, complex issues in several water pollution control amendment povisions, as well as in the public works jobs bill to which it had been connected. The crucial point regarding Section 404 was a suggested moratorium on implementing Phase III (under which the Corps of Engineers was to begin, on July 1, 1977, exercising permit authority over the fullest extent of waters and wetlands). The Senate conferees, particularly Senator Muskie, were unwilling to approve the much longer moratorium which the House conferees insisted on, with the rationale that federal wetlands protection should continue in full force until a thoroughly thought out national wetlands policy could be legislated. This contest, along with other FWPCA issues, left the two bodies at loggerheads and resulted, on April 26, 1977, in the conference committee dropping H.R. 3199 from further consideration while it proceeded to work out agreement on the public works bill.

The Senate conferees strongly favored a stricter federal role in wetlands regulation than that approved by the House in the Wright Amendment. This seems to reflect, in accordance with a plausible application of the Organizational Process model to the two Congressional bodies, that the Senate is more attentive to the needs of the nation at large as it sees them, while the House is more responsive to the "will of the people" as represented by special interest groups. The outcome is also consistent with the notion that the House is the more conservative, and the Senate the more liberal, of the two bodies.

CHAPTER IV

EXTRAPOLATION

We have examined in terms of Allison's models the factors which influenced government policy on wetlands regulation during 1972-1977. A useful extrapolation of this analysis would be to evaluate the possible alternative courses that future federal wetlands policy may take. In this way we might estimate the relative likelihood of adoption of the various alternatives and develop the essential features of the most likely future policy.

The crux of upcoming policy decisions is whether to retain federal regulatory authority over the broadest extent of the nation's waters, as is now the case, or to delegate some extent of regulatory authority to the states.* There are three general alternatives available to the federal government:

---

* It is worth pointing out that this issue is relatively moot as far as actual development or preservation of wetlands is concerned in the short run. As is often the case, actual events do not occur in precise, uniform compliance with federal intent or perception. At present throughout the United States the real effects of Section 404 vary widely from state to state. In those states, such as Massachusetts, which have a strong, protection-oriented state wetlands policy, there is relatively little visibility to the federal program. In other states, such as Florida, Section 404 comprises a strong mechanism which has been applied effectively to bar development in valuable wetlands. And elsewhere, such as for example in Louisiana, state policies have been relatively liberal towards developers while the federal role in the region has remained less visible. So in actuality the application of Section 404 as a working wetlands protection measure is presently dependent on local factors, especially economics, politics, and regional values and interests.

- retain the full federal regulatory authority over the broadest extent of the nation's waters (the status quo).
- divest the federal regulatory authority and delegate to the states regulation of all but major (traditionally navigable) waters and their adjacent wetlands (the Wright and Tower Amendments).
- divest and delegate wetlands regulatory authority on a state-by-state basis.

Retain Section 404 Status Quo

What are the prospects for retaining the status quo indefinitely? Allison's Models II and III suggest that these prospects are slim. The House of Representatives has established an organizational routine which yielded the provisions of the Wright Amendment twice, in both the 94th and the 95th Congress. The House position, instituted and maintained through bureaucratic political influences which continue to act, has become an established organizational routine. It is highly unlikely that the House membership would enact any significant change to this routine, which means that we can expect continued pressure from the House for a roll-back of federal regulatory authority.

The Senate has so far opposed the House pressure, but not through any entrenched attitude favoring indefinite continuation of Section 404 provisions. The Senate routine is based on the rationale that regulation of wetlands should not be delegated until an adequate, deliberately prepared national wetlands policy is developed. Indeed, the Senate in September 1976 rejected by only a single vote (40-39) the Tower

Amendment. It may be only a matter of time until the Senate responds, as did the House, to the political influences which oppose federal regulation, and (or) adopts the stand that continued federal regulation of all waters is unnecessary and can be diminished.

The Administration's rational position is stated in the President's Environmental Message to the Congress, which says concerning wetlands, "My forthcoming amendments...will include proposals to improve wetlands protection and to authorize the states to assume responsibility for carrying out major portions of this program."[1] Senior Corps of Engineers officials have consistently favored delegation of regulation over non-navigable waters, and the Corps' 1975 regulations, which provide for active state participation in the Section 404 process, have encouraged state regulatory programs. So the Administration can be expected to opt for legislation to roll back the present federal role.

The positions of the principal government actors, then, seem set against indefinite retention of Section 404. Unless the environmentalists are able to mount new, strongly persuasive political arguments, some change in the present policy is likely.

Delegation to the States

The Rational Actor model predicts that the Government should favor delegation of wetlands regulation to the states now. The onus of federal overregulation, the impracticality of the federal bureaucracy trying to process permits which

could number 50,000 or more per year, the precedent of other FWPCA provisions, and the "states' rights" concept all weigh in favor of delegation. Even most environmentalists would prefer that regulatory authority be at state level if sufficient guarantees existed to protect wetlands adequately.

However, organizational routines now in effect do not permit delegation of Section 404 authority to the states. No national wetlands policy exists which would satisfy the organizations involved. Most importantly, the states should prove that they are capable of exercising a competent wetlands regulation program before authority is delegated. Results of a 1976 survey showed that probably no more than six states may be competent, by virtue of state legislation and a regulatory program in effect, to carry out the functions of Section 404.[2] Even recognizing the strong political influences pressing for delegation, it is unlikely that, until new federal and state routines are established to guarantee some minimum degree of wetlands protection by the states, the Congress will override the barrier presented by the absence of operative federal and state programs. In addition, as the public becomes increasingly aware of the recently learned values of wetlands, political opposition to wetlands degradation can be expected to increase.

Thus, according primarily to the concepts of Model II, unrestricted delegation of Section 404 to all states seems an unlikely government outcome.

Delegate State-by-State

If the two alternatives just discussed are not likely outcomes, then some middle ground must be found which will be a more feasible action. If no delegation and all delegation are not probable, then some measure of delegation is a more likely outcome.

Assuming for the moment that federal wetlands protection criteria can be arrived at, a procedure could be established to authorize federal certification of individual state wetlands regulatory programs. This procedure could be similar to that now in effect under Section 402(b) of the FWPCA: the National Pollutant Discharge Elimination System (NPDES). Under this system, individual states may apply for and, upon EPA approval, be granted authority to issue permits for discharges of pollutants into the waters of the United States. In the suggested procedure, Section 404 would remain applicable to the navigable waters (as traditionally defined) and their adjacent wetlands, and protection of non-navigable waters would be delegated, upon federal approval, on a state-by-state basis. State permits could be issued subject to federal guidelines designed to insure that the states employ an adequate wetlands protection policy.

To implement such a policy effectively would require overcoming at least the following problems:

- Present lack of a comprehensive national wetlands policy with adequate wetlands protection criteria. (Even under the present Section 404 system, wetlands protection is actually not uniformly administered. A comprehensive, uniform national policy would be even harder to achieve under state administration.)

- The political and administrative hazards inherent in the Administration having to certify some state programs but not others. (Although this problem has not unduly constrained NPDES implementation, the political implications connected with pollutant discharges are probably less touchy than those inherent in Section 404, with its land use control connotations.)

- Providing adequate incentives to all states to institute a qualifying wetlands permit program. (NPDES delegations have stalled recently because many states have not staffed themselves to assume the function[3].)

- Regional coordination problems, where permit policies may vary across state lines and stymie a permit applicant faced with different jurisdictions.

It is beyond the scope of this paper to develop complete solutions to these problems. It is the writer's presumption that approaches can be found, given time and governmental dedication, which will overcome these obstacles. A necessary first step is a diligent effort to develop a comprehensive national wetlands policy acceptable to the Congress. To be effective, this policy must:

- provide for cooperative efforts by local, state, and federal agencies,

- recognize that "the public interest," as a decision criterion for permits, varies regionally,

- provide incentives for each state to develop a qualifying permit program, and

- provide a federal regulatory "hammer" to backstop state and local permit programs for cases where political pressures not representing the national interest may override state power.

There are conditions highlighted by Allison's models which would promote government adoption of the program generally described above. Rationally, the concept is attractive to the

special interest groups involved. It diminishes onerous federal overregulation, but would retain a suitable wetlands protection mechanism if properly implemented. Permit applicants such as farmers, ranchers, foresters, and builders would generally be faced only with state, not federal, approvals.

Organizational processes should find the proposed concept suitable. Those states with viable wetlands regulatory programs will be able to operate their own routines. Those states not meeting federal criteria would presumably be the object of pressure from the various political players to get their programs in order. The Corps of Engineers should be satisfied to be relieved of much of the Section 404 permit workload, but could be expected to retain authority in navigable waters, as it always has.

In the Congress, backers of the Wright and Tower Amendments should find the procedure acceptable since it incorporates the major feature of diminished federal involvement. From the Administration's viewpoint, this alternative fits the intent of the President's wetlands policy message, and fairly well bisects the positions of the Corps of Engineers and the EPA. There would be conjecture as to whether the Corps or the EPA should be the federal approving authority for state programs; a process involving Corps of Engineers recommendations and EPA approval could be effective.

Conclusion

This extrapolation was not intended to prescribe a detailed legislative proposal, but rather to determine the relative

feasibility and likelihood of three general alternative courses which federal wetlands regulatory policy may take. By using the lessons learned from examining recent government actions through the application of Allison's models, a set of observations were made about likely future government behavior. We found little likelihood that the present policy (federal regulation of the broadest extent of wetlands) would continue indefinitely, primarily because of bureaucratic politics. It appeared unlikely, in view of organizational processes, that wholesale delegation of wetlands regulation to the states would be approved. Rational, organizational, and political factors suggested that a median policy, to delegate authority for wetlands regulation on a state-by-state basis under distinct federal guidelines, could be the most likely outcome of the government process.

special interest groups involved. It diminishes onerous federal overregulation, but would retain a suitable wetlands protection mechanism if properly implemented. Permit applicants such as farmers, ranchers, foresters, and builders would generally be faced only with state, not federal, approvals.

Organizational processes should find the proposed concept suitable. Those states with viable wetlands regulatory programs will be able to operate their own routines. Those states not meeting federal criteria would presumably be the object of pressure from the various political players to get their programs in order. The Corps of Engineers should be satisfied to be relieved of much of the Section 404 permit workload, but could be expected to retain authority in navigable waters, as it always has.

In the Congress, backers of the Wright and Tower Amendments should find the procedure acceptable since it incorporates the major feature of diminished federal involvement. From the Administration's viewpoint, this alternative fits the intent of the President's wetlands policy message, and fairly well bisects the positions of the Corps of Engineers and the EPA. There would be conjecture as to whether the Corps or the EPA should be the federal approving authority for state programs; a process involving Corps of Engineers recommendations and EPA approval could be effective.

Conclusion

This extrapolation was not intended to prescribe a detailed legislative proposal, but rather to determine the relative

"PERMITS FOR DREDGED OR FILL MATERIAL

"SEC. 404. (a) The Secretary of the Army, acting through the Chief of Engineers, may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites.

"(b) Subject to subsection (c) of this section, each such disposal site shall be specified for each such permit by the Secretary of the Army (1) through the application of guidelines developed by the Administrator, in conjunction with the Secretary of the Army, which guidelines shall be based upon criteria comparable to the criteria applicable to the territorial seas, the contiguous zone, and the ocean under section 403(c), and (2) in any case where such guidelines under clause (1) alone would prohibit the specification of a site, through the application additionally of the economic impact of the site on navigation and anchorage.

"(c) The Administrator is authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever he determines, after notice and opportunity for public hearings, 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. Before making such determination, the Administrator shall consult with the Secretary of the Army. The Administrator shall set forth in writing and make public his findings and his reasons for making any determination under this subsection.

APPENDIX A

Section 404 of Public Law 92-500, The Federal Water Pollution Control Act Amendments of 1972.

(d) Definitions. For the purpose of issuing or denying authorizations under this regulation.

(1) *"Navigable waters of the United States."* The term, "navigable waters of the United States," is administratively defined to mean waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate commerce landward to their ordinary high water mark and up to the head of navigation as determined by the Chief of Engineers, and also waters that are subject to the ebb and flow of the tide shoreward to their mean high water mark (mean higher high water mark on the Pacific Coast). See 33 CFR 209.260 (ER 1165-2-302) for a more definitive explanation of this term.

(2) *"Navigable waters".* (i) The term, "navigable waters," as used herein for purposes of Section 404 of the Federal Water Pollution Control Act, is administratively defined to mean waters of the United States including the territorial seas with respect to the disposal of fill material and excluding the territorial seas with respect to the disposal of dredged material and shall include the following waters:

(*a*) Coastal waters that are navigable waters of the United States subject to the ebb and flow of the tide, shoreward to their mean high water mark (mean higher high water mark on the Pacific coast);

(*b*) All coastal wetlands, mudflats, swamps, and similar areas that are contiguous or adjacent to other navigable waters. "Coastal wetlands" includes marshes and shallows and means those areas periodically inundated by saline or brackish waters and that are normally characterized by the prevalence of salt or brackish water vegetation capable of growth and reproduction;

(*c*) Rivers, lakes, streams, and artificial water bodies that are navigable waters of the United States up to their headwaters and landward to their ordinary high water mark;

(*d*) All artificially created channels and canals used for recreational or other navigational purposes that are connected to other navigable waters, landward to their ordinary high water mark;

(*e*) All tributaries of navigable waters of the United States up to their headwaters and landward to their ordinary high water mark;

(*f*) Interstate waters landward to their ordinary high water mark and up to their headwaters;

(*g*) Intrastate lakes, rivers and streams landward to their ordinary high water mark and up to their headwaters that are utilized:

(*1*) By interstate travelers for water-related recreational purposes;

(*2*) For the removal of fish that are sold in interstate commerce;

(*3*) For industrial purposes by industries in interstate commerce; or

(*4*) In the production of agricultural commodities sold or transported in interstate commerce;

(*h*) Freshwater wetlands including marshes, shallows, swamps and, similar areas that are contiguous or adjacent to other navigable waters and that support freshwater vegetation. "Freshwater wetlands" means those areas that are periodically inundated and that are normally characterized by the prevalence of vegetation that requires saturated soil conditions for growth and reproduction; and

(*i*) Those other waters which the District Engineer determines necessitate regulation for the protection of water quality as expressed in the guidelines (40 CFR 230). For example, in the case of intermittent rivers, streams, tributaries, and perched wetlands that are not contiguous or adjacent to navigable waters identified in paragraphs (*a*)-(*h*), a decision on jurisdiction shall be made by the District Engineer.

APPENDIX B

Definitions of "Navigable waters of the United States" and "Navigable waters" from the July 25, 1975 Corps of Engineers regulations. (33 Code of Federal Regulations 209.120).

(3) *Effect on wetlands.* (i) Wetlands are those land and water areas subject to regular inundation by tidal, riverine, or lacustrine flowage. Generally included are inland and coastal shallows, marshes, mudflats, estuaries, swamps, and similar areas in coastal and inland navigable waters. Many such areas serve important purposes relating to fish and wildlife, recreation, and other elements of the general public interest. As environmentally vital areas, they constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest.

(ii) Wetlands considered to perform functions important to the public interest include:

(a) Wetlands which serve important natural biological functions, including food chain production, general habitat, and nesting, spawning, rearing and resting sites for aquatic or land species;

(b) Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges;

(c) Wetlands contiguous to areas listed in paragraph (g)(3)(ii) (a) and (b) of this section, the destruction or alteration of which would affect detrimentally the natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics of the above areas;

(d) Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands often include barrier beaches, islands, reefs and bars;

(e) Wetlands which serve as valuable storage areas for storm and flood waters; and

(f) Wetlands which are prime natural recharge areas. Prime recharge areas are locations where surface and ground water are directly interconnected.

(iii) Although a particular alteration of wetlands may constitute a minor change, the cumulative effect of numerous such piecemeal changes often results in a major impairment of the wetland resources. Thus, the particular wetland site for which an application is made will be evaluated with the recognition that it is part of a complete and interrelated wetland area. In addition, the District Engineer may undertake reviews of particular wetland areas, in response to new applications, and in consultation with the appropriate Regional Director of the Bureau of Sport Fisheries and Wildlife, the Regional Director of the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, the Regional Administrator of the Environmental Protection Agency, the local representative of the Soil Conservation Service of the Department of Agriculture, and the head of the appropriate State agency to assess the cumulative effect of activities in such areas.

(iv) Unless the public interest requires otherwise, no permit shall be granted for work in wetlands identified as important by subparagraph (3)(ii), of this paragraph, unless the District Engineer concludes, on the basis of the analysis required in paragraph (f) of this section, that the benefits of the proposed alteration outweigh the damage of the wetlands resource and the proposed alteration is necessary to realize those benefits.

(a) In evaluating whether a particular alteration is necessary, the District Engineer shall primarily consider whether the proposed activity is dependent upon the wetland resources and environment and whether feasible alternative sites are available.

(b) The applicant must provide sufficient data on the basis of which the availability of feasible alternative sites can be evaluated.

(v) In accordance with the policy expressed in paragraph (f)(3) of this section, and with the Congressional policy expressed in the Estuary Protection Act, PL 90-454, state regulatory laws or programs for classification and protection of wetlands will be given great weight. (See also paragraph (g)(18) of this section).

APPENDIX C

Wetlands Policy of the Corps of Engineers (33 Code of Federal Regulations 209.120).

EXCERPT FROM THE PRESIDENT'S ENVIRONMENTAL MESSAGE TO THE CONGRESS

May 23, 1977

WETLANDS

The important ecological function of coastal and inland wetlands is well known to natural scientists. The lasting benefits that society derives from these areas often far exceed the immediate advantage their owners might get from draining or filling them. Their destruction shifts economic and environmental costs to other citizens--often in other states--who have had no voice in the decision to alter them.

We are losing wetlands at the rate of some 300,000 acres per year. While many of the individual developments which have caused this loss may once have been appropriate--and some still may be--we must now protect against the cumulative effects of reducing our total wetlands acreage. For these reasons, I am proposing a concerted federal effort to protect our wetlands. This includes the following steps:

(1) The federal government will no longer subsidize the destruction of wetlands. I am today issuing an Executive Order directing all appropriate federal agencies to refrain from giving financial support to proposed developments in wetlands unless the agency determines that no practicable alternative sites exist.

(2) I support implementation of the Federal Water Pollution Control Act program which regulates the filling and disposal of dredged materials in all U.S. waters or associated wetlands. This important program is essential to wetlands protection, but it should be carried out in a way that avoids undue federal regulation. The present program exempts normal farming, ranching, and forestry practices, and it allows for general permits that do not tie up individuals in unnecessary red tape. These provisions have my support. My forthcoming amendments to the Federal Water Pollution Control Act will include proposals to improve wetlands protection and to authorize the states to assume responsibility for carrying out major portions of this program.

(3) To protect and sustain waterfowl for recreational enjoyment, I am proposing a budget increase of $50 million over the next five years to purchase wetlands, and I have already included in both the FY 1977 and FY 1978 budgets another $10 million for this purpose. I also urge the Congress to enact legislation increasing the price of migratory bird conservation and hunting stamps (the so-called "duck" stamp) so that additional revenue will be available for waterfowl habitat acquisition.

COASTAL BARRIER ISLANDS

Coastal barrier islands are a fragile buffer between the wetlands and the sea. The 189 barrier islands on the Atlantic and Gulf Coasts are an integral part of an ecosystem which helps protect inland areas from flood waves and hurricanes. Many of them are unstable and not suited for development, yet in the past the federal government has subsidized and insured new construction on them. Eventually, we can expect heavy economic losses from this shortsighted policy.

About 68 coastal barrier islands are still unspoiled. Because I believe these remaining natural islands should be protected from unwise development, I am directing the Secretary of the Interior, in consultation with the Secretary of Commerce, the Council on Environmental Quality, and state and local officials of coastal areas, to develop an effective plan for protecting the islands.

His report should include recommendations for action to achieve this purpose.

Office of the White House Press Secretary May 24, 1977

THE WHITE HOUSE

EXECUTIVE ORDER

PROTECTION OF WETLANDS

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), in order to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. (a) 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, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

(b) This Order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property.

Sec. 2. (a) In furtherance of Section 101(b)(3) of the National Environmental Policy Act of 1969 (42 U.S.C. 4331(b)(3)) to improve and coordinate Federal plans, functions, programs and resources to the end that the Nation may attain the widest range of beneficial uses of the environment without degradation and risk to health or safety, each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.

(b) Each agency shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under Section 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

Sec. 3. Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in wetlands, whether the proposed action is in accord with this Order.

Sec. 4. When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

APPENDIX E - PRINT BACK SIDE TOO!

Sec. 5. In carrying out the activities described in Section 1 of this Order, each agency shall consider factors relevant to a proposal's effect on the survival and quality of the wetlands. Among these factors are:

(a) public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion;

(b) maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and

(c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

Sec. 6. As allowed by law, agencies shall issue or amend their existing procedures in order to comply with this Order. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order.

Sec. 7. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting wetlands.

(b) The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of this Order.

(c) The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Sec. 8. This Order does not apply to projects presently under construction, or to projects for which all of the funds have been appropriated through Fiscal Year 1977, or to projects and programs for which a draft or final environmental impact statement will be filed prior to October 1, 1977. The provisions of Section 2 of this Order shall be implemented by each agency not later than October 1, 1977.

Sec. 9. Nothing in this Order shall apply to assistance provided for emergency work, essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

Sec. 10. To the extent the provisions of Sections 2 and 5 of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.

JIMMY CARTER

THE WHITE HOUSE,
May 24, 1977.

NOTES

Chapter I

1. Sierra Club, Statement Before the Water Resources Subcommittee -- Hearing on the Federal Water Pollution Control Act Amendments of 1977 (Washington: March 2, 1977), Exhibit A.

2. Congressman Robert E. Bauman, quoted in Congressional Record, 5 April 1977, p. H3047.

3. Congressman Robert W. Edgar, quoted in Ibid., p. H3056.

4. Congressman Jim Guy Tucker, quoted in Ibid., P. H3060.

5. Among the many available sources which describe the value of wetlands are:

a. Peter Sullivan, "Versatile Wetlands - An Endangered Resource," Conservation News, October 15, 1976 (reprint) p. 1-5.

b. Environmental Research Laboratory, U.S. Environmental Protection Agency, Impact of Construction Activities in Wetlands of the United States, Report EPA-600/3-76-045 (Corvallis, OR: April 1976), p. 1-75.

c. Thomas L. Kimball, Statement Before House Subcommittee on Water Resources Hearings on H.R. 3199 to Amend the Water Pollution Control Act (Washington, DC: The National Wildlife Federation, March 2, 1977), p. 1-28.

d. U.S. Congress, Senate, Committee on Public Works, Section 404 of the Federal Water Pollution Control Act Amendments of 1972, Hearings, Serial No.94-H49 (Washington: U.S. Govt. Print. Off., 1976).

6. Sullivan, p. 4.

7. U.S. Congress, Senate, p. 422.

8. Ibid., p. 423.

9. Ibid.

10. Ibid., p. 113.

Chapter II

1. Department of the Army, Office of the Chief of Engineers, The Corps in Perspective Since 1775 (Washington: U.S. Govt. Print. Off., 1976) p. 8.

2. Charles D. Ablard and Brian Boru O'Neill, "Wetland Protection and Section 404 of the Federal Water Pollution Control Act Amendments of 1972: A Corps of Engineers Renaissance," Vermont Law Review, Vol. 1:51, 1976, p. 54.

3. Ibid., p. 54-55.

4. Ibid., p. 55-56.

5. Department of the Army, Office of the Chief of Engineers, "Corps Initiatives Asserting Regulatory Jurisdiction to Protect U.S. Waters and Wetlands," Unpublished Memorandum, Washington: 1977, p. 1-2.

6. Ibid., p.2.

7. "Permits for Activities in Navigable Waters or Ocean Waters, §209.120(d)," 33 Code of Federal Regulations 209, (Washington: U.S. Govt. Print. Off., 1968).

8. Ablard and O'Neill, p. 57.

9. U.S. Laws, Statutes, etc. United States Statutes at Large, Public Law 91-190, 91st Congress, 1st sess. (Washington: Govt. Print. Off., 1970), V.83, p. 852.

10. William N. Hedeman, Jr., "The Regulatory Programs of the Corps of Engineers," Unpublished paper, George Washington University, Washington, DC: 1976, p. 25.

11. Ibid.

12. "Permits for Activities in Navigable Waters or Ocean Waters, §209.120," 33 Code of Federal Regulations 209 (Washington: U.S. Govt.Print. Off., 1976), p. 359-399.

13. Hedeman, p. 13.

14. Ablard and O'Neill, p. 64.

15. 33 CFR 209.120(f).

16. 33 CFR 209.120(g).

17. Ablard and O'Neill, p. 73-75.

18. Ibid., p. 73.

19. Ibid., p. 74.

20. Ibid., p. 75.

21. U.S. Laws, Statutes, etc., United States Statutes at Large, Public Law 92-500, 92nd Congress, 2d sess. (Washington: U.S. Govt. Print. Off., 1972), V. 86, p. 816.

22. Ablard and O'Neill, p. 80.

23. U.S. Congress, House of Representatives, Committee on Public Works and Transportation, Development of New Regulations by the Corps of Engineers, Implementing Section 404 of the Federal Water Pollution Control Act, Hearings, No. 94-18 (Washington: U.S. Govt. Print. Off., 1975).

24. Kenneth S. Kamlet, National Wildlife Federation, quoted in Ibid., p. 206.

25. Gillis W. Long, U.S. Congressman, quoted in Ibid., p. 113-114.

26. "Ford For Control of All U.S. Waters," The New York Times, 29 July 1976, p. 6:1.

27. U.S. Congress, Senate, p. III-VI.

28. "Tower Amendment to Public Law 92-500," Congressional Record, 19 January 1977, p. S1088-S1089.

29. U.S. Congress, House of Representatives, Committee on Public Works and Transportation, Federal Water Pollution Control Act Amendments of 1977 -- Report to Accompany H.R. 3199 (Washington: U.S. Govt. Print. Off., 1977).

30. "Federal Water Pollution Control Act Amendments of 1977," Congressional Record, 5 April 1977, p. H3026-H3063.

31. "Preservation of the Wilderness, Wildlife, Natural and Historical Resources - Message from the President of the United States," Congressional Record, 23 May 1977, p. H4796-H4804.

Chapter III

1. Graham T. Allison, Essence of Decision: Explaining the Cuban Missile Crisis (Boston: Little, Brown, 1971).

2. Ibid., p. 88.

3. Tilford C. Creel, "An Understanding of the Navy's New England Base Realignments Decision of 17 April 1963 as Explained by Allison's Models," Unpublished research paper, U.S. Naval War College, Newport, RI: 1975.

4. Lawrence J. Korb, "The F-18 Decision: Rational, Organizational or Political?" Unpublished paper, U.S. Naval War College, Newport, RI: 1976.

5. U.S. Laws, Statutes, etc. United States Statutes at Large, Public Law 92-500, 92nd Congress, 2d sess. (Washington, U.S. Govt. Print. Off., 1972), v. 86, p. 816.

6. U.S. Congress, Senate, Committee on Public Works, A Legislative History of the Water Pollution Control Act Amendments of 1972, Serial No.93-1 (Washington: U.S. Govt. Print. Off., 1973), v.1, p. 177.

7. Ibid., p. 327.

8. William N. Hedeman, Jr., "The Regulatory Programs of the Corps of Engineers," Unpublished paper, George Washington University, Washington, DC: 1976, p. 13.

9. Department of the Army, Office of the Chief of Engineers, "Permits for Activities in Navigable Waters or Ocean Waters," Federal Register, Vol. 40, No.144, Part IV, 25 July 1975, p. 31322.

10. U.S. Congress, Senate, Committee on Public Works, Section 404 of the Federal Water Pollution Control Act Amendments of 1972, Hearings, Serial No. 94-H49 (Washington: U.S. Govt. Print. Off., 1976) p. 549.

Chapter IV

1. "Preservation of the Wilderness, Wildlife, Natural and Historical Resources - Message from the President of the United States," Congressional Record, 23 May 1977, p. H4796-H4804.

2. U.S. Congress, House of Representatives, Committee on Public Works and Transportation, Federal Water Pollution Control Act Amendments of 1977 -- Report to Accompany H.R. 3199 (Washington: U.S. Govt. Print. Off., 1977) p. 67.

3. Council on Environmental Quality, Environmental Quality - 1976, The Seventh Annual Report on Environmental Quality (Washington: U.S. Govt. Print. Off., September 1976), p. 16.

BIBLIOGRAPHY

Ablard, Charles D. and O'Neill, Brian Boru. "Wetlands Protection and Section 404 of the Water Pollution Control Amendments of 1972: A Corps of Engineers Renaissance." Vermont Law Review, 1976. V. 1:51, p. 51-115.

Allison, Graham T. Essence of Decision: Explaining the Cuban Missile Crisis. Boston: Little, Brown, 1971.

Council on Environmental Quality. Environmental Quality-1976, The Seventh Annual Report on Environmental Quality. Washington: U.S. Govt. Print. Off., September 1976.

Creel, Tilford C. "An Understanding of the Navy's New England Base Realignments Decision of 17 April 1963 As Explained by Allison's Models." Unpublished research paper. U.S. Naval War College, Newport, RI: 1975.

Department of the Army. Office of the Chief of Engineers. "Corps Initiatives Asserting Regulatory Jurisdiction to Protection U.S. Waters and Wetlands." Unpublished memorandum. Washington: 1977.

_____. _____. "Permits for Activities in Navigable Waters or Ocean Waters." Federal Register, V. 40, No. 144, Part IV, 25 July 1975, p. 31320-31343.

_____. _____. The Corps in Perspective Since 1775. Washington: U.S. Govt. Print. Off., 1976.

_____. Office of the General Counsel. "Analysis of the Wright Amendment to Section 404 of the Federal Water Pollution Control Act Amendments of 1972. Unpublished Memorandum. Washington: 17 June 1976.

Environmental Law Institute. Proceedings of the National Wetlands Protection Symposium, June 6-8, 1977. (To be published). Washington: 1977.

"Federal Water Pollution Control Act Amendments of 1976." Congressional Record, 3 June 1976, p. H5229-H5303.

"Federal Water Pollution Control Act Amendments of 1977." Congressional Record, 5 April 1977, p. H3026-H3063.

"Ford for Control of All U.S. Waters." The New York Times, 29 July 1976, p. 6:1.

Friedrich, Carl J., ed. The Public Interest. New York: Atherton Press, 1962.

Hedeman, William N. Jr. "The Regulatory Programs of the Corps of Engineers." Unpublished paper. The George Washington University, Washington, DC: 1976.

Hill, John R. Jr. "The Wetlands Policy of the U.S. Army Corps of Engineers: An Analysis." Unpublished paper. The George Washington University, Washington, DC: 1976.

Kimball, Thomas L. Statement Before House Subcommittee on Water Resources, Hearings on H.R. 3199 to Amend the Water Pollution Control Act. Washington, DC: The National Wildlife Federation, March 2, 1977.

Korb, Lawrence J. "The F-18 Decision: Rational, Organization, or Political?" Unpublished paper. U.S. Naval War College, Newport, RI: 1976.

"Permits for Activities in Navigable Waters or Ocean Waters, §209.120." 33 Code of Federal Regulations 209. Washington: U.S. Govt. Print. Off., 1976, p.359-399.

Power, Garrett. "The Fox in the Chicken Coop -- The Regulatory Program of the U.S. Army Corps of Engineers." Unpublished paper. University of Maryland School of Law, College Park, MD: 1976.

"Preservation of the Wilderness, Wildlife, Natural and Historical Resources - Message from the President of the United States." Congressional Record, 23 May 1977, p. H4796-H4804.

Ratliff, Dick. "Wetlands Protection under the Corps of Engineers' New Dredge and Fill Jurisdiction." The Hastings Law Journal, September 1976. V.28, p. 223-245.

"Senate Passage: Water Pollution." Congressional Quarterly Weekly Report, 4 September 1976, p. 2449-2450.

Sierra Club. Statement Before the Water Resources Subcommittee-Hearing on the Federal Water Pollution Control Act Amendments of 1977. Washington: March 2, 1977.

Sullivan, Peter. "Versatile Wetlands--An Endangered Resource." Conservation News, 15 October 1976. Reprint.

"Tower Amendment to Public Law 92-500." Congressional Record, 19 January 1977, p. S1088-S1089.

U.S. Congress. House of Representatives. Committee on Public Works and Transportation. Development of New Regulations by the Corps of Engineers, Implementing Section 404 of the Federal Water Pollution Control Act. Hearings. No. 94-18. Washington: U.S. Govt. Print. Off., 1975.

_____. _____. _____. Federal Water Pollution Control Act Amendments of 1977 -- Report to Accompany H.R. 3199. Washington: U.S. Govt. Print. Off., 1977.

_____. Senate. Committee on Public Works. A Legislative History of the Water Pollution Control Act Amendments of 1972. Serial No. 93-1. Washington: U.S. Govt. Print. Off., January 1974. 2 vols.

_____. _____. _____. Section 404 of the Federal Water Pollution Control Act Amendments of 1972. Hearings. Serial No. 94-H49. Washington: U.S. Govt. Print. Off., 1976.

U.S. Department of the Interior. Fish and Wildlife Service. Proceedings of the National Wetland Classification and Inventory Workshop, 1975. Washington: July 1976.

U.S. Environmental Protection Agency. Environmental Research Laboratory. Impact of Construction Activities in Wetlands of the United States. Report EPA-600/3-76-045. Corvallis, OR: April 1976.

_____. Office of Research and Development. California Environmental Quality Act: Innovation in State and Local Decisionmaking. Report EPA-600/5-74-023. Washington, DC: October 1974.

U.S. Laws, Statutes, etc. United States Statutes at Large. Public Law 91-190, 01st Congress, 1st sess. Washington: U.S. Govt. Print. Off., 1970. V. 83, p. 852-856.

_____. _____. Public Law 92-500, 92nd Congress, 2d sess. Washington: U.S. Govt. Print. Off., 1972. V. 86, p. 816-903.

"Water Pollution Amendments Voted in the House." Congressional Quarterly Weekly Report, 12 June 1976, p. 1521-1522.