

CHAPTER 1

INTRODUCTION

America's largest wetland community is losing its marshes and swamps to the Gulf of Mexico. Coastal Louisiana is being replaced by open water at a rate of fifty square miles per year, largely as a result of federal navigation policy, the dredging of canals, flood control levees, and the withdrawal of oil and gas. If current trends continue, an ecosystem that supports the nation's oldest bilingual culture, 25 percent of the nation's fishing industry, and North America's largest fur-producing area, will be destroyed in the next century. This destruction could be further accelerated if sea level rises one or more feet as a result of the projected global warming from the greenhouse effect.

Are these marshes and swamps worth saving? For how long? Who is responsible for seeing that a decision is made? These are questions for policy makers, not a technical panel. Yet for them to make a reasoned judgment, they will need to know how to solve the problem, what it will cost, and the likely results for various measures.

Over the last twenty years, various solutions have been suggested to save Louisiana's coastal wetlands. Proposals have included unharnessing the Mississippi River; breaching the levees to allow river water to reach the wetlands; building giant levees along the entire coast; restoring the rapidly disintegrating barrier islands; filling the many canals that have been dredged through the marsh; or using combinations of these alternatives. Thus far, however, most investigations have focused on specific impacts and responses, not on a comprehensive solution. No one has systematically synthesized the available information to determine what must be done to save 10, 25, or 50 percent of Louisiana's coastal ecosystem, nor has anyone developed a comprehensive tool for such an analysis.

Although additional scientific research will be necessary, sufficient information is available to assess this question and begin to develop a plan for saving Louisiana's wetlands. The Louisiana Wetland Protection Panel was convened by the Louisiana Geological Survey and the U.S. Environmental Protection Agency, and met on Grand Terre Island September 17-19, 1985. The purpose of the panel was to specify strategies likely to substantially reduce wetland loss in coastal Louisiana through the end of the next century, for use in a subsequent effort to develop a comprehensive plan. Based on the available body of scientific literature, the panel reached the following conclusions:

1. **Wetland loss in Louisiana is a problem with national importance.** The coastal wetlands of Louisiana constitute 40 percent of all U.S. coastal wetlands, and support a major fraction of the U.S. fishing, hunting, and trapping industries, and indirectly, the poultry industry. Unlike wetland loss elsewhere which mostly results from private actions, the coastal wetland loss in Louisiana results primarily from activities conducted or authorized by government agencies. Many of the options for protecting wetlands cannot be implemented without the cooperation of the federal government.
2. **Although natural processes are involved, human activities are responsible for the net loss of wetlands.** These activities include levees, channelization, canals, draining and filling of land, and human modification of drainage patterns.
3. **Wetland loss could be reduced by combinations of marsh restoration and management;** Mississippi river diversion of freshwater, nutrients, and sediment; barrier island and beach stabilization; and regulation of human activities.

4. **A comprehensive plan of action is needed.** Such a plan should have a reasonable chance of protecting a large fraction of Louisiana's wetlands through the next century. This document has outlined twenty options to be evaluated in the formation of such a plan.
5. **A number of institutional impediments must be overcome before a consensus can be obtained on the design and implementation of a plan of action.** Among the impediments are incentives for private property owners for the development and implementation of restoration plans; incentives for leaseholders and others affected by proposed remedial strategies; criteria and values assigned to wetlands; the role of cost-benefit analysis; conflicts within and between agency missions; and ownership of newly created lands.
6. **No single approach will adequately curtail wetland loss in Louisiana.**
7. **Initial formulation of an action plan should not await completion of additional scientific studies.** Nevertheless, development of the plan will define additional research needs.
8. **Ongoing and approved remedial measures should go forward on schedule.** The need for a comprehensive plan of action does not imply that previously approved projects should be delayed.
9. **If projections that the greenhouse effect will raise sea level one foot or more in the next fifty years are accurate, the need for immediate action is much greater than previously thought.** The global warming has not so far been an important factor in causing wetland loss in Louisiana. However, long-term plans should consider the rise in sea level that could occur in the next fifty to one hundred years. The possibility that sea level may eventually rise one or meters is not a reason to give up on efforts to protect coastal wetlands. But it is another reason to implement measures to restore the delta's former ability to keep pace with subsidence and sea level rise through other processes.

This report provides an overview of the problem and outlines the analysis that must be synthesized to develop a plan. Chapter 2 describes the causes of wetland loss. Chapter 3 discusses a variety of possible options to protect wetlands. Chapter 4 describes ongoing activities to address the problem. Chapter 5 lays out a study to evaluate comprehensive solutions to wetland loss in Louisiana.

Many groups will eventually have to address the loss of Louisiana's wetlands, including the Federal Emergency Management Agency's Flood Insurance Administration, the Fish and Wildlife Service, the National Park Service, the National Oceanic and Atmospheric Administration, the Environmental Protection Agency, the Army Corps of Engineers, the State of Louisiana, coastal parishes, the U.S. Congress, the Louisiana Legislature, and the private sector. We hope that this report accelerates the process by which these groups become part of the solution to the problem of wetland loss in coastal Louisiana.

A number of the wetland restoration and management activities discussed in this report fall under existing federal programs, such as those authorized under sections 401 and 404 of the Clean Water Act, Section 10 of the River and Harbor Act, and the Coastal Zone Management Act, as well as state regulatory programs. In particular, the regulatory program established by Section 404 provides the major avenue of federal involvement in material. This program was designed to ensure that discharges into wetlands and other waters covered by the program do not result in unacceptable adverse impacts on aquatic environments. Anyone who intends to discharge material into wetlands, even if the purpose is to protect wetlands from rising sea level, should contact EPA or the Army Corps Engineers to determine whether a permit for the proposed activity is necessary.