

Wetlands, Streams, and Other Waters

**Regulation • Conservation
Mitigation Planning**

Paul D. Cylinder
Kenneth M. Bogdan
April I. Zohn
Joel B. Butterworth



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Preface

Growth and development pressure throughout the United States have collided with efforts to protect our wetlands, streams, and other waters. Agencies, corporations, and individuals wishing to develop or protect these valuable and dwindling resources can become lost in the maze of federal, state, and local laws and regulations. We have attempted to unravel the intricacies of the regulatory programs that control activities in streams, wetlands, and other waters; and offer advice, drawn from extensive professional experience, on how most effectively and efficiently to navigate the regulatory process. We have written this book for:

- Land use planners
- Project managers for agencies preparing environmental compliance documents
- Developers
- Landowners
- Regulatory agency personnel
- Elected officials
- Environmental consultants
- Members of environmental organizations
- Lawyers
- Water suppliers
- Growers and others involved in agricultural production
- Mine operators
- Foresters
- Ranchers
- Environmentally concerned citizens

Readers will find this book and its extensive appendices to be a valuable and reliable reference on regulation and the environmental permitting process for wetlands, streams, and other waters. The federal regulatory process is presented in detail; state regulatory programs are summarized, and additional information is provided for states with the most extensive regulatory programs. Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act are examined in detail, and other federal laws related to the regulation of wetlands and other waters are introduced. Readers will find information and advice on:

- Ecology of wetlands and other waters
- Identification of wetlands and other waters
- Federal and state regulatory programs for wetlands and other waters
- Best approaches to the permit process and permitting agencies
- Mitigation planning and implementation
- Regional wetland conservation planning

We hope that the advice in this practical guide will prove helpful in pursuing projects and programs involving wetlands, streams, and other waters throughout the United States.

Paul D. Cylinder
Kenneth Bogdan
April Zohn
Joel Butterworth
March 2004

CHAPTER ONE

Introduction

Wetlands, streams, and other waters are highly productive and complex ecosystems. Once considered of little or no use, wetlands are now center stage as citizens and politicians alike acknowledge their great importance and extraordinary rate of loss. Protection of wetlands is a national challenge. An estimated 53 percent have been lost in the contiguous 48 states over the last 200 years (Dahl 1990), and the country is currently losing nearly 60,000 acres per year (U.S. Fish and Wildlife Service 2000). This continuing decline has prompted federal, state, and local governments to regulate activities that threaten these special natural resources.

This book is a practical guide and desktop reference for anyone seeking to understand how wetlands, streams, and other waters are regulated in the United States. Federal wetland laws are described in detail, with particular attention to Section 404 of the Clean Water Act (CWA), the predominant protection law for wetlands and other waters. Extensive appendices present the text of federal laws, key regulations, and regulatory guidance. In addition, because most states have some form of wetland regulation, a comprehensive overview of relevant state laws and programs is provided.

What Are Wetlands?

Wetlands are areas of land that are wet either permanently or seasonally and support specially adapted vegetation. To regulate activities in wetlands, federal and state agencies have developed specific definitions and methods for identifying their boundaries. Identification methods vary among agencies, focussing on hydrologic, soil, and vegetative parameters. To be regulated as a wetland under federal law, a site must have specific indicators of conditions for each of these three categories. Changes in identification methods have been controversial because they have resulted in changes in the extent of areas considered subject to jurisdiction. Chapter 2, Ecology of Wetlands

An estimated 53 percent of wetlands have been lost in the contiguous 48 states over the last 200 years, and the current rate of loss is nearly 60,000 acres per year.

CWA = Clean Water Act

Wetlands are areas of land that are wet either permanently or seasonally that support specially adapted vegetation.

and Other Waters, explains the basic ecological concepts underlying the distinguishing characteristics of wetlands. Not all wetlands are easily recognizable; for example, those occurring in seasonally dry or desert areas can be particularly difficult to identify.

The definitions federal agencies use to identify wetlands for regulatory purposes are presented in chapter 3, Jurisdictional Limits of Wetlands and Other Waters. The identification of other regulated water bodies, such as rivers, streams, lakes, and bays, is also described.

What Is the Value of Wetlands?

Many wetland functions are valuable, although not all are obvious.

Wetlands affect our lives and livelihoods in many ways. While valuable, not every wetland function is obvious. For example, wetlands provide flood protection by slowing flows and storing water. They serve as the recharge site for groundwater that is a source of the public water supply. Toxics and other pollutants passing through wetlands are transformed and removed, and water quality is improved. They protect stream banks and shorelines from erosion, and are essential to food production because they provide food, spawning, and nursery areas for many commercial fish and shellfish.

Wetlands offer recreational opportunities, open space, and aesthetic possibilities. Boating, swimming, fishing, hunting, hiking, photography, bird and other wildlife observation, and scientific study are activities that take place in wetlands or depend on them to enrich human existence.

How Are Wetlands and Other Waters Regulated?

USACE = United States Army
Corps of Engineers

The U.S. Army Corps of Engineers (USACE), through the authority of Section 404 of the CWA, is the federal agency most involved in wetland regulation. Wetlands are only one type of water body that is regulated under federal law. USACE regulates many other waters, including streams, lakes, ponds, bays, and portions of the oceans that meet specific criteria (*see* chapter 3, Jurisdictional Limits of Wetlands and Other Waters). Federal regulation of wetlands and other waters under Section 404 is described in chapter 4, Federal Regulation of Wetlands and Other Waters, and the permitting process is described in chapter 5, Section 404 Permitting Process. Summaries of important cases highlighting judicial interpretations of Section 404 clarify the circumstances under which the federal government can regulate privately owned wetlands (*see* appendix K, Case Law Summaries).

Some states also regulate activities in wetlands and other waters.

Some states also regulate activities in wetlands and other waters. In some cases, state agencies may regulate wetlands and other aquatic resources where the federal government does not exert jurisdiction. In parts of some states, such as the coastal zone, wetlands are regulated more strictly. State laws that regulate activities in wetlands around the nation are summarized in chapter 6, State Wetland Laws.

Can Wetland Losses Be Mitigated?

The mitigation of impacts on wetlands can be a complicated affair. It requires good scientific information, careful planning, close coordination of all concerned parties, and effective mitigation design and implementation. Creating, restoring, or enhancing wetlands on project sites can be successful if mitigation is properly planned and implemented; alternatively, mitigation banking—the use of preapproved and established sites where wetland habitat compensates for wetland impacts elsewhere—can be used in the mitigation of wetland impacts or incorporated into regional wetland conservation plans. Chapter 7, *Mitigation Planning*, describes the wetland mitigation process, describes key issues, offers important recommendations, and presents a framework for effective and efficient mitigation planning and implementation.

The Future of Wetland Regulation

The future of wetland regulation involves breaking away from project-specific wetland planning and impact mitigation. The regional or watershed approach to wetland conservation planning is rapidly gaining favor. Early identification of resources and designation of important wetland conservation areas provides a context for assessing the relative impacts of individual projects within a larger planning area. Regional wetland conservation planning can help project proponents situate their projects more effectively and can aid regulatory agencies in streamlining the permitting process. As of this writing, regional wetland conservation plans are in development across the United States. Chapter 8, *Regional Wetland Conservation Planning*, discusses important planning concepts and key elements for successful development of regional wetland conservation plans.

Chapter 9, *Epilogue*, summarizes some of the present and future policy challenges surrounding wetland regulation and conservation planning that face federal, state, and local agencies; landowners; project proponents; and environmentally concerned citizens.

The mitigation of impacts on wetlands requires good scientific information, careful planning, close coordination of all concerned parties, and effective mitigation design and implementation.



Great egrets feeding in seasonal freshwater marsh