



United States
Department of
Agriculture

Agricultural
Research
Service

National
Agricultural
Library

Special
Reference
Brief 2006-01

Wetlands in Agricultural Landscapes

A Conservation Effects Assessment Project (CEAP) Bibliography



Wetlands in Agricultural Landscapes

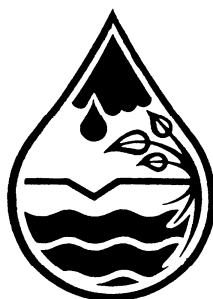
A Conservation Effects Assessment Project (CEAP) Bibliography

Special Reference Briefs Series no. SRB 2006-01

Compiled by
**Rachel A. Maderik
Stuart R. Gagnon
Joseph R. Makuch**

Water Quality Information Center
National Agricultural Library
Agricultural Research Service
U.S. Department of Agriculture

1225 citations



**Water
Quality**

National Agricultural Library Cataloging Record:

Maderik, Rachel.

Wetlands in agricultural landscapes : a Conservation Effects Assessment Project (CEAP) bibliography.

(Special reference briefs ; NAL-SRB. 2006-01)

1. Wetland conservation--Bibliography.
2. Agricultural landscape management--Bibliography.
3. Agriculture--Research--United States--Bibliography.

I. Gagnon, Stuart R. II. Makuch, Joseph R. III. Water Quality Information Center (U.S.) IV. Title.

aZ5071.N3 no. 2006-01

Abstract

Wetlands in Agricultural Landscapes, Special Reference Briefs 2006-01. U.S. Department of Agriculture, National Agricultural Library.

This bibliography is one in a multi-volume set developed by the Water Quality Information Center at the National Agricultural Library in support of the U.S. Department of Agriculture's Conservation Effects Assessment Project (CEAP). This bibliography is a guide to recent scientific literature covering environmental aspects of wetlands in agricultural landscapes. The purpose of the bibliography is to highlight research findings in two main areas: (1) the effect of conservation practices (and other agricultural activities) on wetlands and (2) the environmental effects of wetlands as conservation practices (including constructing and restoring wetlands). The bibliography will also facilitate the identification of knowledge gaps regarding effects of conservation practices on ecosystem services provided by wetlands in agricultural landscapes, and help identify where research is needed.

Keywords: wetlands, conservation practices, wetland conservation, constructed wetlands, ecological restoration, wetland plants, wetland soils, water quality, surface water, wildlife

Mention of trade names or commercial products in this report is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the U.S. Department of Agriculture.

To ensure timely distribution, this report has been reproduced essentially as supplied by the authors. It has received minimal publication editing and design. The authors' views are their own and do not necessarily reflect those of the U.S. Department of Agriculture.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

September 2006

TABLE OF CONTENTS

Preface	1
Acknowledgments	2
About This Bibliography	3
CEAP Wetlands Component Assessment Regions Map	4
Wetlands at the National and International Scale	
General Information	5
Effects of Agricultural Conservation Practices on Wetlands	44
Wetlands as Agricultural Conservation Practices	76
Appalachian Highlands Wetlands	
General Information	111
Effects of Agricultural Conservation Practices on Wetlands	122
Wetlands as Agricultural Conservation Practices	124
Central Plains Wetlands	
General Information	127
Wetlands as Agricultural Conservation Practices	127
Central Valley Wetlands	
General Information	129
Effects of Agricultural Conservation Practices on Wetlands	132
Wetlands as Agricultural Conservation Practices	137
Glaciated Interior Plains Wetlands	
General Information	145
Effects of Agricultural Conservation Practices on Wetlands	154
Wetlands as Agricultural Conservation Practices	160
Gulf-Atlantic Coastal Flats/Rolling Plains Wetlands	
General Information	173
Effects of Agricultural Conservation Practices on Wetlands	200
Wetlands as Agricultural Conservation Practices	229

High Plains Wetlands	
General Information	263
Effects of Agricultural Conservation Practices on Wetlands	270
Wetlands as Agricultural Conservation Practices	274
Mississippi Alluvial Valley Wetlands	
General Information	277
Effects of Agricultural Conservation Practices on Wetlands	284
Wetlands as Agricultural Conservation Practices	287
Northwest Wetlands	
General Information	295
Effects of Agricultural Conservation Practices on Wetlands	301
Wetlands as Agricultural Conservation Practices	303
Prairie Pothole Region Wetlands	
General Information	309
Effects of Agricultural Conservation Practices on Wetlands	315
Wetlands as Agricultural Conservation Practices	325
Wetlands in Multiple CEAP Wetlands Assessment Regions	
General Information	335
Effects of Agricultural Conservation Practices on Wetlands	347
Wetlands as Agricultural Conservation Practices	354
U.S. Wetlands Outside of CEAP Wetlands Assessment Regions	
General Information	361
Effects of Agricultural Conservation Practices on Wetlands	364
Wetlands as Agricultural Conservation Practices	367
Subject Index	371
Author Index	411

Preface

This is one in a series of bibliographies developed by the Water Quality Information Center at the National Agricultural Library in support of the U.S. Department of Agriculture's Conservation Effects Assessment Project (CEAP).

The purpose of CEAP is to study the environmental effects of conservation practices implemented through various U.S. Department of Agriculture conservation programs. A national assessment covers cropland, wetlands, wildlife and grazing lands. Conservation practices that will be assessed include conservation buffers; erosion control; wetlands conservation and restoration; establishment of wildlife habitat; and management of nutrients, irrigation, tillage, pests, and grazing on rangeland and pastureland. More information about this and other components of CEAP is available at www.nrcs.usda.gov/technical/nri/ceap/.

The current titles in this series are

- *Environmental Effects of U.S. Department of Agriculture Conservation Programs*
Special Reference Briefs 2004-01
- *Implementing Agricultural Conservation Practices: Barriers and Incentives*
Special Reference Briefs 2004-02
- *Data and Modeling for Environmental Credit Trading*
Special Reference Briefs 2004-03
- *Agricultural Conservation Practices and Related Issues: Reviews of the State of the Art and Research Needs*
Special Reference Briefs 2004-04
- *Wetlands in Agricultural Landscapes*
Special Reference Briefs 2006-01
- *Environmental Effects of Conservation Practices on Grazing Lands*
Special Reference Briefs 2006-02

Each of the documents, as well as bibliographies on similar topics, is accessible online from the Water Quality Information Center at www.nal.usda.gov/wqic/.

Acknowledgments

The center gratefully acknowledges these organizations who granted permission to use their citations and abstracts.

- CAB International/CABI Publishing
www.cabi-publishing.org
- CSA
www.csa.com
- Elsevier/Scopus
www.scopus.com
- National Information Services Corporation (NISC)
www.nisc.com
- Thomson Corporation/Thomson Scientific
scientific.thomson.com

The following databases were used to develop this bibliography:

- **AGRICOLA** (National Agricultural Library)
- **Aquatic Science and Fisheries Abstracts** (CSA)
- **BIOSIS Previews** (Thomson Scientific)
- **CAB Abstracts** (CABI Publishing)
- **Fish and Fisheries Worldwide** (NISC)
- **Scopus** (Elsevier)
- **Treesearch** (USDA Forest Service)
- **Water Resources Abstracts** (CSA)
- **Wildlife and Ecology Studies Worldwide** (NISC)
- **Zoological Record** (Thomson Scientific)

In addition, support from the Natural Resources Conservation Service (NRCS) for the development of these bibliographies is greatly appreciated. Special thanks to Diane Eckles, NRCS, for her valuable assistance with this volume.

About This Bibliography

This bibliography is a guide to recent scientific literature covering environmental aspects of wetlands in agricultural landscapes. The purpose of the bibliography is to highlight research findings in two main areas: (1) the effect of conservation practices (and other agricultural activities) on wetlands and (2) the environmental effects of wetlands as conservation practices (including constructing and restoring wetlands). This information is useful in designing both policies and on-farm conservation systems to optimize the environmental benefits of wetlands. The bibliography will also facilitate the identification of knowledge gaps regarding effects of conservation practices on ecosystem services provided by wetlands in agricultural landscapes, and help identify where research is needed.

When possible, citations are grouped according to CEAP wetlands assessment regions. The regions are shown in the map on page 4. Please note that the regional boundaries are not absolute. Citations were placed in the regions that appeared to be the best fit, but some citations may be relevant to more than one region (e.g., Rolling Plain and Mississippi Alluvial Valley). Also, while there are only a few citations in the Central Plains section, additional relevant citations can be found in the section covering multiple regions on p. 335.

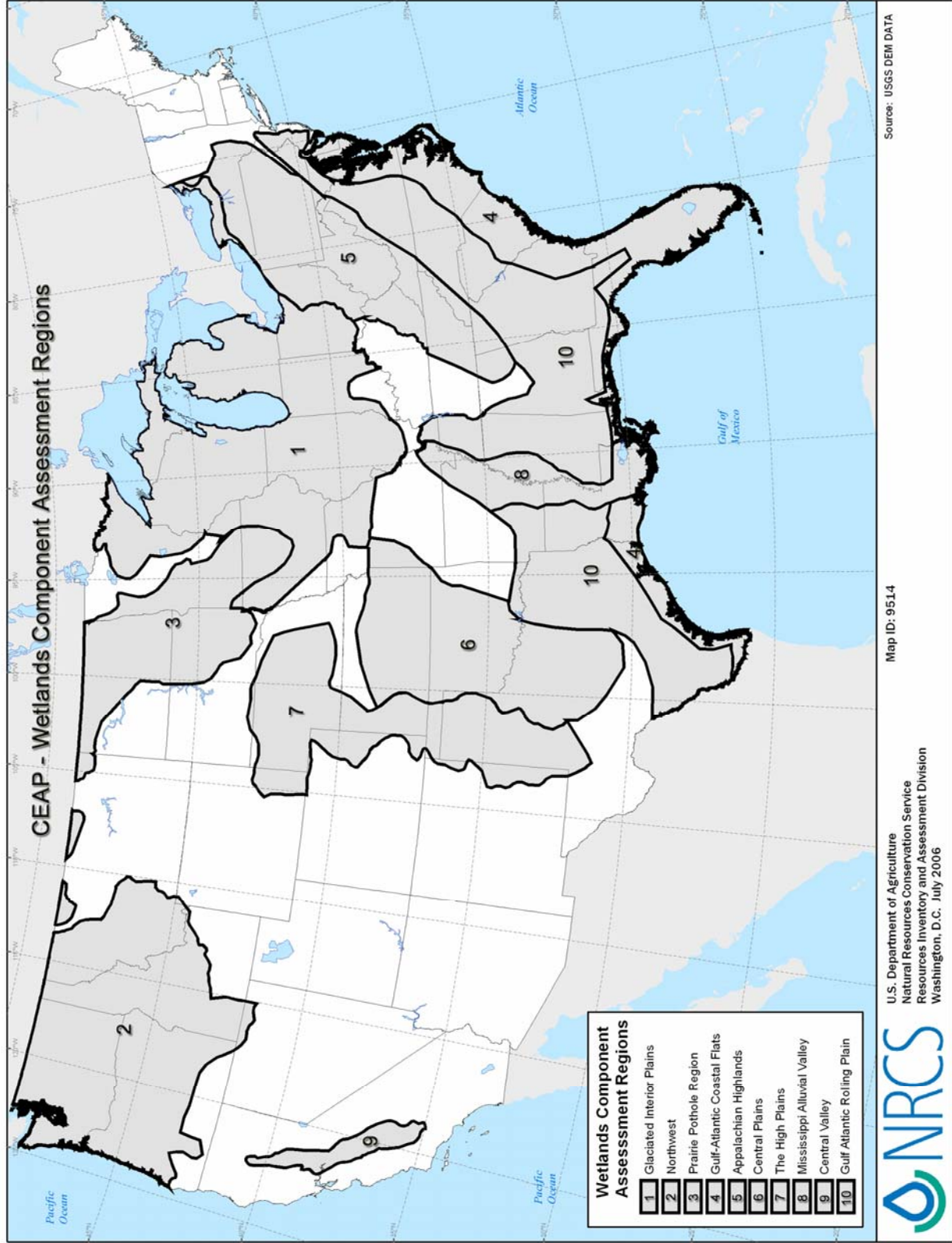
For more information on the CEAP wetlands assessment, see the CEAP Web site at www.nrcs.usda.gov/technical/nri/ceap/.

In addition to the two categories listed above, selected citations to publications that provide general information on wetland functions, processes, and occurrence are also included.

There are 1,225 citations with abstracts (when available) in this bibliography. Citations were found through literature searches of the AGRICOLA database, produced by the National Agricultural Library, and several commercial bibliographic databases. In addition, Water Quality Information Center staff created citations for documents that were located by other means. Documents cited were published from 1980 through early 2006. URLs are provided for online documents that are freely available. The inclusion or omission of a particular citation does not imply endorsement or disapproval.

Within sections, citations are arranged alphabetically by title. To locate information on a specific topic, for example, "frogs," use the subject index beginning on page 371. To ensure that you see all the relevant citations for a particular topic, be sure to also look up related terms in the subject index, such as "Anura," from the example above. An author index is also available beginning on page 411.

To obtain a specific document, please contact your local library. Information on how to obtain documents from the National Agricultural Library can be found at www.nal.usda.gov/services/request.shtml.



Please refer to <http://www.nrcs.usda.gov/technical/nri/ceap/> for the most recent map of the CEAP Wetlands Component Assessment Regions.