



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Agriculture and "No Net Loss" of Wetlands

by Ralph E. Heimlich, Keith D. Wiebe, Roger Claassen, Dwight Gadsby, and Robert M. House

"No net loss" of wetlands, a national policy goal supported in both Bush and Clinton administrations, requires that we minimize wetland conversion and restore wetlands to compensate for unavoidable losses. The United States appears to be approaching "no net loss" of wetland acreage in the 1990s. However, sustaining the "no net loss" goal will be difficult unless programs to conserve wetlands remain in place, greater efforts toward wetland restoration are undertaken, or both.

Agriculture's changing role in wetland losses

Although most people now accept that wetlands provide valuable environmental benefits, from the earliest colonial times wetlands were converted to other uses, altering and degrading wetland functions. When the settlers arrived, almost 224 million acres of wetlands were located in the continental United States, mostly in the Midwest, the Southeast, and the Delta and Gulf States (figure 1).

By 1992, nearly half of the original wetlands had been converted to other uses (figure 2). Most wetland conversions in the nineteenth and early twentieth centuries were for agricultural

purposes. Changes in wetland policy cut the rate of net wetland conversion over time, from more than 800 thousand acres per year between settlement and 1954 to less than 80 thousand acres per year in 1982–92. Agriculture's share of gross conversion dropped from more than 80 percent in 1954–74 to 20 percent in 1982–92 (figure 3). Although we are still losing wetlands in the United States, we are losing them more slowly.

Wetland restoration has increased

While wetland conversion is lower than ever, since 1990 previously drained wetlands are also being restored by federal, state, and private programs. Restoration activity in 1992–96 under the Clean Water Act's Section 404 and mitigation banking activities, Fish and Wildlife Service programs, and USDA's Wetland Reserve Programs rose to an average of almost 110,000 acres per year, not counting private restoration efforts (figure 4). Given a continuing gross loss of about 157,000 acres per year (based on 1982–92 trends), it appears that the United States is now within 47,000 acres per year of achieving "no net loss" of wetland acreage.

Sustaining "no net loss"

Even if we achieve "no net loss" in wetland acreage in a given year, can it be sustained? Challenges to Section 404 regulation and the Swampbuster program in 1995 and 1996, uncertainty about the future of federal farm policy, and continuing budget constraints bring into question how sustainable "no net loss" would be if conservation and restoration programs were substantially weakened.

The payments authorized by the 1996 FAIR Act are scheduled to expire after the 2002 season. Although Swampbuster remains intact under the act, an eventual end to farm program payments could render Swampbuster meaningless for lack of an effective sanction. At high commodity prices (such as occurred in 1996), ERS simulations show that an estimated 5.8 to 13.2 million acres of wetlands now protected under the Swampbuster provisions could be profitably converted to agricultural production. Increased production on these acres would reduce prices and depress U.S. farm income by 2.5 to 5 percent, mainly in areas with no wetlands to convert.

If Congress decides to compensate wetland owners for Swampbuster and Section 404 regulation, it will be costly. Compensating owners of all existing wetlands at the average wetlands market value of \$1,459 per acre would cost \$162.6 billion. Compensating only those owners whose wetlands are actually in danger of conversion would cost from \$61.1 billion to \$89.3 billion. Compensating only owners of land that is profitable to convert to agriculture would cost \$29.2 billion.



The views expressed here are those of the authors and
do not necessarily reflect positions of the USDA.

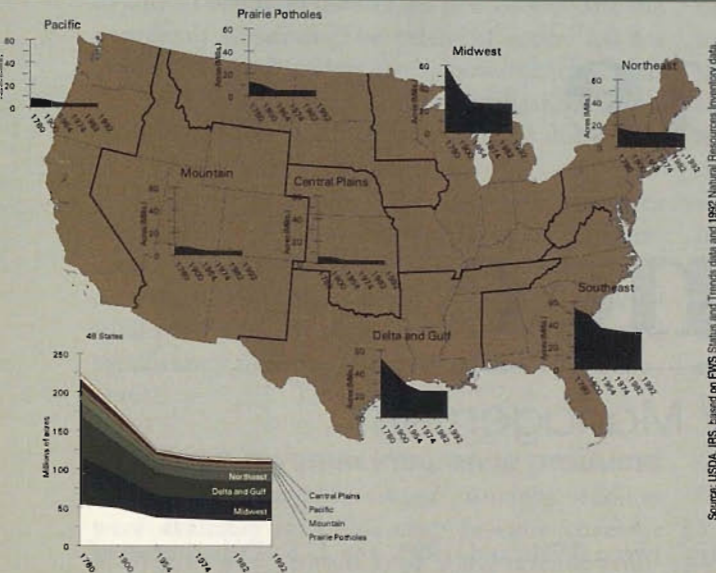


Figure 1. Wetlands remaining, by year and wetland region, 1780-1992

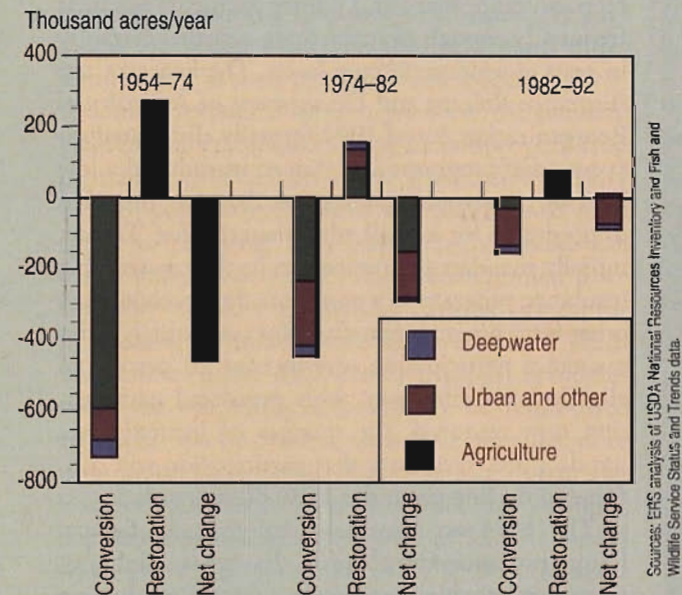


Figure 3. Losses slowed dramatically since the 1950s, and
agriculture's share has dropped

■ For more information

Heimlich, R.E., K.D. Wiebe, R. Claassen, D. Gadsby, and R.M. House. *Wetlands and Agriculture: Private Interests and Public Benefits*. Washington DC: U.S. Department of Agriculture, Economic Research Service, AER-765, 1998.

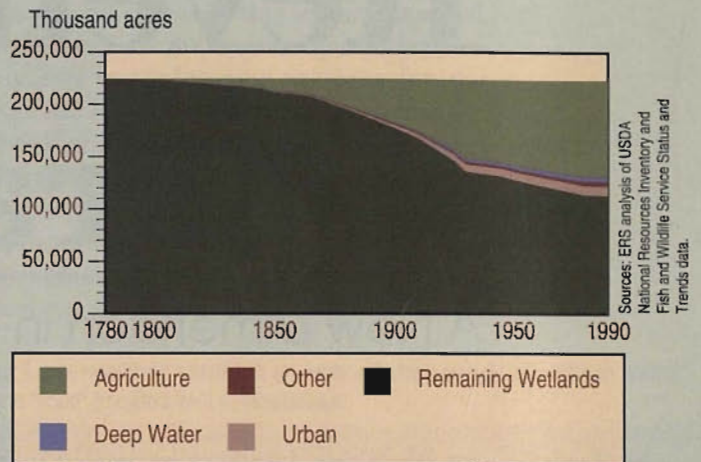


Figure 2. Almost half of original wetlands in the lower 48 states have
been converted to other uses, mostly agriculture

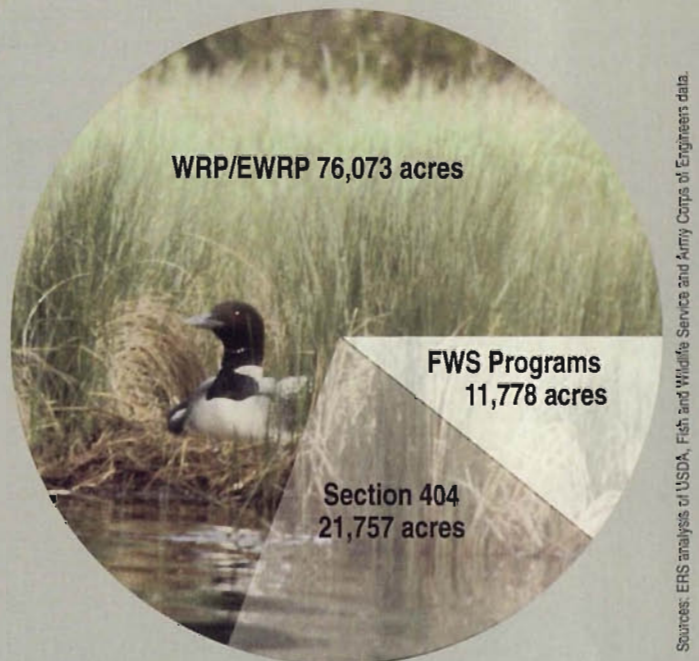


Figure 4. Increased wetland restoration in 1992-96 averaged 110,000
acres per year

Fretwell, J.D., J.S. Williams, and P.J. Redman, eds. *National Water Summary on Wetland Resources*. Washington DC: U.S. Department of the Interior, U.S. Geological Survey, Water Supply Paper 2425, 1996.