



United States Department of Agriculture
Natural Resources Conservation Service

Helping People Help the Land

CEAP-Wetlands Background

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CEAP — Building the Science Base for Conservation

Science-based conservation is the key to managing agricultural landscapes for environmental quality.

The Conservation Effects Assessment Project (CEAP) is a multi-agency effort to quantify the environmental benefits of conservation practices and develop the science base for managing the agricultural landscape for environmental quality. Project findings will guide USDA conservation policy and program development and help farmers and ranchers make informed conservation choices.

The three principal components of CEAP—the national assessment, the watershed assessment studies, and the bibliographies and literature reviews—contribute to the building and evolution of the science base for conservation.

Wetlands

The goal of CEAP-Wetlands is to develop a broad collaborative foundation that facilitates the production and delivery of scientific data, results, and information. Findings will routinely inform conservation decisions affecting wetland ecosystems and the services they provide, particularly focusing on the effects and effectiveness of USDA conservation practices and Farm Bill conservation programs on ecosystem services provided by wetlands in agricultural landscapes.

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Conservation Effects Assessment Project Southeastern Coastal Plain Foundation Study: Assessing Wetland Restoration/Creation Practices on Southern Agricultural Lands

Background

The CEAP-Wetlands synthesis for the eastern Piedmont-Coastal Plain region indicated that, because wetland diversity is a regional characteristic, knowledge of wetland hydrogeomorphic (HGM) type is important to identifying the potential ecosystem services derived from agricultural conservation practices. “Wetland” practices (restoration/creation and habitat management) were less common across the region than “conservation-buffer” practices; in addition, there was little concrete information on the HGM wetland types being installed or managed under the wetland practices. This constrains the ability to assess the services gained.

The findings suggested a need to characterize the nature of wetland practice implementation in the region. This will be addressed, in part, by the assessment for the mid-Atlantic region (New Jersey to Virginia), where most of the recent wetland practice implementations have occurred. The remaining implementations were largely in four Southeastern states (North Carolina, South Carolina, Georgia, and Mississippi), with about 60 percent of these concentrated in South Carolina.

Restoration and creation are practices for which wetland type is directly relevant to ecosystem services and which can be more readily evaluated than less defined “habitat management” practices. The Southeastern Coastal Plain “foundation study” will specifically evaluate implemented Wetland Restoration/Creation practices (Natural Resources Conservation Service practice standards 657/658) in South Carolina, Georgia, and Mississippi to span the South Atlantic-Gulf portion of the Piedmont-Coastal Plain. This geographic scope encompasses the Hilly (Rolling) Coastal Plain, which is

of limited extent in the mid-Atlantic states.

Scope

Because the Southeast has a comparatively small total number of projects, a representative subregional analysis of wetland restoration/creation on Southeastern agricultural lands is feasible. The study will explicitly examine practice implementation in terms of HGM classes and will provide a foundation database for any future south-Atlantic assessment.

The study will address these questions:

- Are the reported restoration/creation practices linked to individual wetlands or to wetland complexes?
- For individual wetlands, by what methods (*e.g.*, hydrologic or land treatment) were wetlands restored or created, and can the wetland types (HGM classes) be determined?
- Were wetlands restored or created in the original or suitable geomorphic settings, or were atypical HGM classes/settings (as in Gwin et al. 1999) created?

Plan information for applied 657/658 practices will be evaluated in a sample stratified across subregional landscapes (Piedmont, Hilly Coastal Plain, Coastal Flats) and proportional between South Carolina and Georgia/Mississippi. Geomorphic settings, potential HGM classes, methods used to restore or create wetlands, project goals, and the inferred wetland types will be categorized.

The data will be used to develop a landscape profile of the HGM wetland classes restored/created, and to assess the extent to which the practices have

replaced or added to the regional wetland resource. For a small subsample of project sites, as feasible, HGM wetland type and simple wetland indicators will be assessed on site.

References

De Steven, D., and R. Lowrance. Forthcoming. Agricultural conservation practices and wetland ecosystem services in a wetland-dominated landscape: the Piedmont–Coastal Plain region. Draft paper for *Ecological Applications* Special Issue.

Gwin, S.E., M.E. Kentula, and P.W. Shaffer. 1999. Evaluating the effects of wetland regulation through hydrogeo-morphic classification and landscape profiles. *Wetlands* 19:477-489.

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