

Strategic Plan for Improving Coastal Management in North Carolina - A Geographic Information System for Targeting Wetland Restoration

Restoration Plan Database: Crystal Reports of Individual Plan Summaries

I. BASIC PLAN DATA

Plan name:

Strategic Plan for Improving Coastal Management in North Carolina - A Geographic Information System for Targeting Wetland Restoration

Brief description of plan:

This plan covers the coastal area of North Carolina that covers twenty counties and over 9,000 square miles of land area, or about 20% of the state. It also includes over 87% of the state's surface water. Certain starting considerations shaped the approach and methods used in developing a procedure for identifying and prioritizing potential wetland restoration sites. The procedure needed to fit within the context and objectives of the Wetlands Conservation Plan for the North Carolina coastal areas. Since the plan is dealing with a large geographic area, it was obvious from the outset that a method was needed that could be applied to large land areas without site visits to each potential wetland restoration site. Almost out of necessity, a GIS-based approach was needed. The procedure needed to be ecologically sound and scientifically valid, based on the best information available about restoration ecology and the functions of wetlands. It needed to be based on fundamental principles of wetlands and landscape ecology rather than on arbitrary or subjective decision. Finally, the procedure was to be watershed-based primarily because consideration of a restored wetland's potential role in its watershed is the soundest basis for determining its ecological significance.

Region the plan is located within:

South-Atlantic Region

Watershed(s) included within the plan:

S005x , S010x , S013x , S016x , S020a , S020b , S020w , S030x , S035x , S040x , S042x , S045x , S048x , S050x , S053x

Area plan covers (in square miles):

9,000.00 square miles

Plan scale:

State

Plan's lead organization(s):

Division of Coastal Management

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On-line version of plan:

Date of original plan:

4/1997

II. TECHNICAL INFORMATION

Plan includes restoration goals: Y

Level of detail of the goals:

G

Summary of the goals:

The broad goal is to protect the overall environmental quality of the coastal area and to guide growth and development in a manner consistent with the capability of the land and water for development, use, or preservation based on ecological considerations.

Plan recommends or uses criteria for selecting restoration sites (e.g. cost benefit ratio, ecological benefits):

Y

Summary of the criteria:

Local, site-specific characteristics of a wetland must be evaluated within the context of the landscape in which it exists to truly begin to understand the ecological significance of the wetland's functions. These functions are more accurately viewed as landscape functions rather than functions of individual wetlands. The functional significance of a potential restoration site in a particular watershed may be assessed as if it were a restored and fully functioning wetland. The restoration functional assessment procedure presented here is based on the wetland functional assessment method developed by the North Carolina Division of Coastal Management. For a full description of the landscape wetland functional assessment procedure, see North Carolina Coastal Region Evaluation of Wetland Significance, A Wetland Functional Assessment Procedure for the North Carolina Coastal Area (DCM, 1997). The procedure is intended for use with GIS data for regional application. Since the procedure uses GIS analysis, it requires digital information in GIS format. GIS data layers used in the procedure include wetland boundaries and types, soils data, land use-wetland cover, hydrography, watershed boundaries, endangered species occurrences, estuarine primary nursery areas, water quality classifications, NC priority protection areas, and anadromous fish spawning areas.

Plan recommends restoration of specific project sites:

N

Plan includes a discussion of funding sources:

Y

Plan addresses long-term protection of restored sites:

N

Partners included in developing the plan:

Federal
State
Local
Private landowners

Type(s) of public outreach included during plan development:

Information not available

Plan includes public outreach as part of plan implementation (e.g. annual public meeting, local group participation):

N

Plan discusses the application of innovative approaches to restoration:

N

Plan make use of GIS mapping capabilities:

Y

Plan addresses monitoring/reference sites for ecosystem level monitoring (baseline conditions) by:

N

Plan addresses monitoring/reference sites for project level monitoring by:

N

The plan discusses or coordinates with other restoration plans covering the same geographic area:

N

Other plan names:

Plan contains detailed information on historic and/or current habitat size, rate of loss, acres restored or protected, etc.):

Y

Summary of this habitat information:

Much of the North Carolina coastal area is occupied by wetlands, which in many areas comprise nearly 50 percent of the landscape. These wetlands are of great ecological importance, in part because they occupy so much of the area and are significant components of virtually all coastal ecosystems, and in part because of their relationships to coastal water quality, estuarine productivity, wildlife habitat, and the overall character of the coastal area. Historically, about 50% of the original wetlands of the coastal area have been drained and converted to other land uses. Although agricultural conversion, the largest historic contributor to wetland loss, has largely stopped, wetlands continue to be lost as they are drained or filled for development. Conflicts between economic development and wetlands protection continue to be a major concern, with many coastal communities considering wetlands protection to be a major barrier to needed economic development. Since wetlands are such a dominant part of the coastal landscape and are vitally important to many aspects of the area's ecology, their management and protection is a major concern.