Maryland Coastal Zone Management Program
GB625.M3C5 1988

CHARLES COUNTY

NON-TIDAL WETLANDS PROGRAM

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1988

COASTAL ZONE
INFORMATION CENTER

JUN 1989

Work Approaches and Status of Special Projects

Task 4. Non-Tidal Wetlands Program

a. Participation of staff planners in Maryland Department of Natural Resources Non-Tidal Wetlands Identification and Delinia-tion Workshop.

b. Review of policy option papers and draft Legislation prepared by Non-Tidal Wetlands Task Force. Develop a Wetlands Protection Program for Charles County in close cooperation with State's draft legislation.

c. Recommend modification of or additions to existing project review procedures, and coordination with permitting agencies.

UPDATE: The Environmental Planner I has completed the 3-day training workshop conducted by D.N.R. (agenda attached). The Chief of Comprehensive Planning and Environmental Planner III will also be attending the workshop within the coming year.

Charles County has included a "Wetland Protection Element" in it's Critical Area Program as required by the legislation. The proposed Program has not been approved or adopted as of this date. A public hearing is scheduled for program approval by the County Commissioners on August 3, 1988.

A program for protection of non-tidal wetlands outside of the Critical Area will be developed in conjunction with State level policy decisions.

U.S. Department of Interior maps (1" = 2000') are to be for-matted for compatibility with Charles County Tax Maps. Two sets of 90 clear polyester film overlays are being ordered to aid in the identification, and assessment of non-tidal wetland areas.

Work Product:

Wetland Protection Program
Non-Tidal Wetland Maps

Maryland Department of Natural Resources

Water Resources Administration
Tawes State Office Building
Annapolis, Maryland 21401
Telephone: 974-3841

William Donald Schaefer
Governor

Torrey C. Brown, M.D.
Secretary

James W. Dunmyer
Director

Copy file
~~Ken~~
Ursula

May workshop reserved for in-house personnel

April 7, 1988

MEMORANDUM

TO: Distribution

FROM: Denise H. Clearwater
Non-Tidal Wetlands Division

SUBJ: Non-Tidal Wetlands Identification and Delineation Workshop

In 1988 the Non-Tidal Wetlands Division will offer four (4) three-day training workships for the identification and delineation of non-tidal wetlands. Topics will include the U. S. Fish and Wildlife Service classification system, hydric soils, hydrology and vegetation. Field sessions will be held each day of the workshop. Regulatory programs and suggestions for project planning will also be discussed.

The workshops will be of special interest to persons working in the Critical Area.

Attendees should bring their own lunches and wear appropriate clothes for the field.

Dates for the workshops are:

May 9-11, 1988	June 21-23, 1988
~~July 19-21, 1988~~	August 23-25, 1988

All workshops will be held at the Jug Bay Wetlands Sanctuary in Anne Arundel County (see map).

NOTE: Class size is limited. Preference will be given to local government personnel.

Please return the attached registration form indicating the names and addresses of persons who wish to attend, the date of the desired workshop, and an alternate date. If neither workshop is available, you will not be placed on a waiting list or registered for any other session unless requested. No phone calls please.

DHC:mw
Enclosures: (4)

AGENDA

Day 1	
9:00	Introduction
9:15	Slide Show "Maryland Non-tidal Wetlands"
9:30	U.S. Fish and Wildlife Service Classification System
10:00	Coffee Break
10:15	Wetland Soils, Hydrology, and Landscape
11:15	Water Regimes
11:45	Information Sources
12:15	Lunch
1:15	Field Session - Soils
3:00	Adjourn
Day 2	
9:00	Wetland Vegetation 1) Definition (hydrophytes) 2) Plant Morphology
10:15	Coffee Break
10:30	Information Sources
10:45	Plant Key Exercise
12:00	Lunch
1:00	Field Exercise
3:00	Adjourn
Day 3	
9:00	Field Exercise
12:00	Lunch
1:00	Delineation Review
2:00	Wetland Regulatory Agencies
3:00	Project Review
4:00	Adjourn

Work Approaches and Status of Special Projects

TASK 4: NON-TIDAL WETLANDS PROGRAM

a. Participation by staff planners in Maryland Department of Natural Resources Non-Tidal Wetlands Identification and Delineation Workshop.

b. Review of policy option papers and draft Legislation prepared by Non-Tidal Wetlands Task Force. Develop a Wetlands Protection Program for Charles County in close cooperation with State's draft legislation.

c. Recommend modification of or additions to existing project review procedures, and coordination with permitting agencies.

UPDATE:

Task 4a. Completed in the second quarter of FY '88.

Task 4b. A review of the Non-Tidal Wetlands Policy Options paper is included with this report. A program for protection of Non-Tidal Wetlands outside of the Critical Area will be developed in conjunction with State level policy decisions once those choices have been made.

Charles County has included a "Wetlands Protection Element" in its Critical Area Program as required by the legislation. The program has not been approved or adopted as of this date. The final draft of the County's Critical Area Program was sent to the Critical Area Commission for their review and approval on September 15, 1988. Charles County was asked to revise some sections of the draft while the Commission continued to debate another section. At this date it is not known when the Commission will grant final approval and allow the County Commissioners to adopt the plan.

Task 4c. The Senior Environmental Planner has developed a Non-Tidal Wetlands Notification Process that contains the policies and procedures for alerting the COE and DNR of applications for development in Charles County's non-tidal wetlands. A draft of this Policy / Procedure statement is included in this report.

(TASK 4: NON-TIDAL WETLANDS PROGRAM, Continued)

Work Product:

Wetland Protection Program: Forthcoming.
Non-Tidal Wetland Maps: We are waiting for the U.S. Fish and Wildlife Service to complete their updating of these maps. We will then proceed with copies at 1:600 scale.

POLICY / PROCEDURE
Environmental Planning Division of Comprehensive Planning

Subject: NON-TIDAL WETLANDS NOTIFICATION PROCESS

1.0 INTRODUCTION & PURPOSE

To establish and identify the steps of a standardized process for notifying the Army Corps of Engineers, (herein after referred to as COE), and the State of Maryland Department of Natural Resources, (herein after referred to as DNR), that an application for Preliminary Subdivision Plan, or Site Development Plan, containing non-tidal wetlands has been submitted to the Department of Planning and Zoning of Charles County, MD.

2.0 POLICY

The Senior Environmental Planner or designated staff member shall submit a Wetlands Notification Form (see attached) to the COE River Basins Permits Section and DNR Standards, Regulations, and Policy Development Section within 10 days from receipt. A copy of this action shall be transmitted to the Applicant or Property Owner and the Chief of Current Planning.

3.0 PROCEDURE / PROCESS

3.1 APPLICANT'S PACKAGE

a. The Environmental Planning Division shall receive a copy of all Site Development Plans and Preliminary Subdivision Plans from the Current Planning Division for Non-Tidal Wetland review within 5 days of receipt.

3.2 REVIEW PROCESS

a. Review the National Wetlands Inventory Maps for identification of the presence of non-tidal wetlands.
b. Review Charles County's Soil Survey prepared by the Soil Conservation Service for identifying the presence of hydric soils on site.
c. Review the Flood Insurance Rate Map, (herein after referred to as FIRM) for Charles County, MD. and determine if the site lies within a 100-year floodplain.
d. The Environmental Planning Division shall complete a Wetlands Notification Form for submittal to COE and DNR if Non-Tidal Wetlands are noted through review. The Chief of Current Planning shall receive a copy of this form or a memo noting no wetlands within 10 days of receipt.

CHARLES COUNTY GOVERNMENT
Department of Planning and Zoning

JACQUELYN M. MAGNESS, Director

To: Cheryl Smith, Chief
River Basin Permits Section
Army Corps of Engineers

JoAnn Watson, Chief
Standards, Regulations, and Policy Development Section
Office of Envr. Programs

FROM: John F. Mudd, Chief
Development Review Section

RE: Subdivision Name:_____
Subdivision No.:_____
Preliminary Site Development Plan Name:_____
_____
Preliminary Site Development Plan No.:_____
Owner:_____
_____
_____
Engineer:_____
_____
_____
Date Submitted:_____

The Department of Planning and Zoning is hereby notifying the Corps of Engineers and the Maryland Office of Environmental Programs that it has received the above referenced plan for review. Based on the evidence below, this Department has informed the engineer that a Corps Permit and a State of Maryland Water Quality Certification may be necessary because of the presence of wetlands on the site or because the development proposes to discharge fill material to waters of the United States. The engineer has been advised to contact your office. This Department would appreciate notification of the findings with respect to this development.

_____ Review of plan indicates hydric soils on site.

_____ Review of plan and/or other map source indicates streams on site which are proposed to be disturbed by development.

_____ Plan submitted with delineation of 100-year floodplain pursuant to Charles County Subdivision Regulations.

cc:

MEMORANDUM

TO: JACQUELYN M. MAGNESS, DIRECTOR OF PLANNING
FROM: PETER A. KUMBLE, ENVIRONMENTAL COORDINATOR
RE: DNR NONTIDAL WETLANDS TASK FORCE REPORT
DATE: AUGUST 20TH, 1988

COMMENTS ON NONTIDAL WETLANDS TASK FORCE FINAL REPORT JULY, 1988

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1) There should be an Abstract and/or an Executive Summary at the beginning of the report itself explaining the entire document.

2) I don't know why, but the Nontidal Wetlands Task Force Report should not be located after the Elements section of this report. The Elements were a byproduct of the Task Force Report, reflecting a supposed analytical thought process. The report's present format does not allow the reader to follow in this process.

3) There needs to be a table of contents.

4) The individual sections should be separate chapters with all the key issues of that chapter listed in outline format preceding the text.
For example: Declaration of Public Policy

a. Importance of Wetlands
   i. .....
   ii. .....
b. Present Loss of this Resource
c. Goals for Protection of Resource
   i. .....
d. Intent of State
   i. .....
   ii. .....
   iii. .....

By following this format, the reader could quickly understand the scope each chapter (Element) before reading it. This would also greatly aid in understanding the whole document. Not being a participant of the six month task force responsible for drafting this report, it is difficult to perceive all of the issues that it brought to light. With out an easy to understand outline of each chapter (Element), I find that I have to scan each paragraph, desperately searching for the true meaning and spiritual enlightenment. We live in an information society. I want it

clearly presented to me before I delve in.

5) Maybe each of the twelve issues could be restated and clarified as **Issues / Problems** and **Goals / Objectives.**

6) This might sound silly but the use of **text graphics;** bold face characters, paragraphs indentations, horizontal lines separating blocks of text, etc greatly help the reader to visually organize the thought process of the text.

7) The Mitigation Workgroup Summary (no page number..) best accomplishes all that I have mentioned above. More importantly, it is not overly verbose in its summation of items discussed.

8) Move the definition of terms to the back of the report.

9) Why were the separate workgroups formed? I am not myself questioning the action, I like it, but I am not told of why, when, how. Ironically, the info contained in the workgroup summary's told me more about what should be done to protect nontidal wetlands than does the Elements for Inclusion in a Nontidal Wetlands Statute.

Work Approaches and Status of Special Projects

TASK 4: NON-TIDAL WETLANDS PROGRAM

a. Participation by staff planners in Maryland Department of Natural Resources Non-Tidal Wetlands Identification and Delineation Workshop.

b. Review of policy option papers and draft Legislation prepared by Non-Tidal Wetlands Task Force. Develop a Wetlands Protection Program for Charles County in close cooperation with State's draft legislation.

c. Recommend modification of or additions to existing project review procedures, and coordination with permitting agencies.

UPDATE:

Task 4a. Completed in the second quarter of FY '88.

Task 4b. Completed in the third quarter of FY '88. Charles County is waiting for the State Nontidal Wetlands Bill to be approved and made law before proceeding with any County interpretations of the DNR Bill. In the mean time, the County has outlined a program to protect Nontidal wetland floodplains and Stream Valleys. This proposed program is entitled the "Stream Valley Protection and Land Acquisition Program." An outline of this program is program is included in this report.

Task 4c. Completed in the third quarter of FY '88.

Work Product:

Wetland Protection Program: Stream Valley Protection Program outline included in this report. Copy of State Nontidal Wetlands Bill included in this report.
Non-Tidal Wetland Maps: We are waiting for the U.S. Fish and Wildlife Service to complete their updating of these maps. We will then proceed with copies at 1:600 scale.
Modifications to Project Review Procedures: Included in 3rd Quarter Report.

CHARLES COUNTY GOVERNMENT
Department of Planning and Zoning

JACQUELYN M. MAGNESS, Director

MATTAWOMAN FACILITIES PLAN / EPA CONCERNS

- **Nontidal Wetland Protection Program Implementation**

  - STREAM VALLEY PROTECTION PROGRAM

    To promote the protection and regulation of stream valleys and adjacent non-tidal wetlands, Charles County shall establish a Stream Valley Protection Program. Stream Valley planning areas will include but not be limited to the Zekiah Swamp, Gilbert Swamp, Mattawoman Creek, Nanjemoy Creek, Swanson Creek, Indian Creek, and Port Tobacco River. The implementation strategy will be as follows:

    1. Define and delineate Stream Valley Management Areas for the above mentioned drainage basins.

    2. Formulate management objectives, protection plans, and implementation techniques for each stream valley.

    3. Establish a local land trust, cooperative conservation easement program, or other formalized measures to acquire and protect sensitive stream valley habitat areas.

    4. Outright purchase of lands that lie within the 100 year floodplain utilizing County, state, federal, or private funding sources.

    In addition, Charles County proposes to prohibit any filling of lands that lie within the 100 year floodplain as delineated on the USFWS floodplain map. Exception to this prohibition apply only towards special services such as but not limited to utilities and roads.

- **Charles County Growth Policies**

  See Attached Charles County Comprehensive Plan Goals & Objectives Statement.

- **Charles County Land Use Control**

  - COMPREHENSIVE REZONING

    To implement the County's Growth Policies, the County will initiate a Comprehensive Rezoning in February, 1989. This process will take 14 - 16 months and will result in the adoption of new regulations affecting zoning, subdivision, and development practice. As currently conceived, the new regulation will include supplementary regulations and performance standards for:

    - Floodplains
    - Environmentally assessment requirements
    - Stormwater management and sediment control
    - Resource protection standards
    - Stream valley protection

Post Office Box "B" La Plata, Maryland 20646 (301) 645-0590 or 870-3896

EQUAL OPPORTUNITY COUNTY

CHARLES COUNTY GOVERNMENT
Department of Planning and Zoning

JACQUELYN M. MAGNESS, Director

NON-TIDAL WETLANDS

Key Issues:

* Mitigate the environmental effects of new development accommodated by expansion of the Mattawoman Waste Water Treatment Plant.

* Provide consistency of environmental regulations to ease understanding by the public, and administration by County Government.

* Avoid duplication of State and Federal programs while applying those programs in Charles County.

* Cost of environmental protection:

    - public
    - private

* Availability of reliable data on the location, extent, and type of wetlands.

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EQUAL OPPORTUNITY COUNTY

NON-TIDAL WETLANDS IMPLEMENTATION TECHNIQUES

PROS & CONS OF VARIOUS IMPLEMENTATION PROGRAMS by Peter Kumble

A. Vegetative Buffer To Wetlands Areas of Mattawoman & Zekiah

PROS - This approach would help to reduce to reduce nutrient export from non-point source pollution. Similar to MDE's Vegetative Filter Strip Program. This is a good first step.

CONS - Although the intent here may be good, a 25' Vegetative Buffer may too simplistic an approach to be considered as THE Non-tidal Wetlands Protection Program for Charles Co. In addition, the amount of land that would be affected by this action is unknown due to a lack of reliable data.

B. Extend the Req's of CBCA Non-Tidal Wetland Program to Zekiah Swamp

PROS - This suggestion was originally on the boards when the County was drafting its Critical Area Program. Would give the County some strong legal tools with which to protect these areas as well as gaining the support of all of the land owners who wanted the inclusion of Zekiah in Crit Area Regs'.

CONS - Will require increased annual funding from CBCA to implement this additional program. If they will not up the $, we will need to secure other funding sources.

C. Prohibit Filling in the 100 year Flood Plains of Mattawoman & Zekiah

PROS - This program would be simple to administer because reliable data indicating the limits of the 100 year flood plain already exist. This program would cost the least to implement. A good idea, but again, as with option A., this should be an element of a total program rather than the program itself.

CONS - Resistance form the development community. May be too simplistic.

D. Adoption of a County Wide Non-Tidal Wetlands Program in Conformance w/ Proposed State Legislation.

PROS - Not a bad idea if it were to be in tandem with CBCA regs' for Zekiah & Mattawoman. It could give the County control of its wetlands regulations. It could provide a single set of County wide regulations. Charles County will most likely have to do this once the State legislation is passed.

CONS - One of the criticisms of the proposed State DNR Non-Tidal Wetlands Programs was that it replicated some existing State programs and confused which authority would be involved with enforcement. For a non-tidal wetlands program to work, it must be as stream lined (sorry) as possible; utilizing existing legislative programs. Problems with duplication of existing enforcement and legislation.

E. Develop a Stream Valley Protection Program w/ Land Acquisition Program

PROS - A great idea. This could be implemented with a passive land acquisition program.

CONS - This is the most costly option as it involves land acquisition and could/would involve some County $ for regulation/implementation. Why not again make this an element of a comprehensive non-tidal wetlands program that again applies CBCA legislation to County non-tidal Wetlands?

PROS & CONS OF VARIOUS IMPLEMENTATION PROGRAMS by Peter Kumble

A. Vegetative Buffer To Wetlands Areas of Mattawoman & Zekiah

PROS -
- o Reduction of nutrient export (run off)
- o Similar To MDE's Vegetative Filter Strip Program
- o A good 1st step

CONS -
- o May be too simplistic
- o Amount of affected land is unknown

B. Extend the Req's of CBCA Non-Tidal Wetland Program to Zekiah Swamp

PROS -
- o Original idea of Critical Area Plan
- o Would give County strong legal tool for protection

CONS -
- o Would require increased $ from CBCA

C. Prohibit Filling in the 100 year Flood Plains of Mattawoman & Zekiah

PROS -
- o Simple to administer
- o Existing data already exists
- o Least costly to implement

CONS -
- o Resistance from development community
- o May be too simplistic

D. Adoption of a County Wide Non-Tidal Wetlands Program in Conformance with Proposed State Legislation.

PROS -
- o Would provide County-wide regulations

CONS -
- o Would replicate existing proposed legislation
- o State may be enacting this anyway

E. Develop a Stream Valley Protection Program w/ Land Acquisition Program

PROS -
- o A great idea
- o Could be combined w/ Passive Land Acquisition plan

CONS -
- o None, as this would protect land w/o $ to County

It is the commissioners intention to adopt Alternate E, Stream Valley Protection Program, and they are considering Alternate C, Prohibiting Filling in the 100 Year Flood Plain, with certain exceptions. These exceptions are:

-- Essential services such as but not limited to:

- o Utilities
- o Roads
- o Parks, etc.

MEMORANDUM

TO: Jacquelyn Magness
Director of Planning and Zoning

FROM: Susan Weber S.W.
Chief of Sanitation, Public Works

DATE: November 28, 1988

SUBJECT: **MATTAWOMAN FACILITIES PLAN SUPPLEMENT**

Attached for your information is a copy of the public notice advertising the public meeting to discuss the subject supplement. Also attached is a copy of the revised facilities plan with the supplement or addendum included. Please note the Summary and Conclusions section of the addendum (which immediately follows Chapter 10 in the document).

As we had discussed with the consultant who prepared this plan, five alternatives are shown that the County may use in implementing a program to protect non-tidal wetlands in the Zekiah and Mattawoman areas (See pages iv-v, of the Summary). I have today been informed by Bill Puhl, who is in charge of Construction Grants for MDE, that EPA has reviewed the document and has a request to make of the County. Bill Buhlmann of EPA advises that his organization will have an easier time approving the document if the County picks one mitigation alternative which it will follow. He suggests the County needs to be more firm in the language of this facilities plan. He also suggests that the County's mitigation choice be read into the record at the public meeting on December 7, 1988.

This is to ask concerning the status of the County's Critical Area Plan and as to whether you think the County will be in a position to choose one wetlands mitigation alternative in the near future.

Please advise as soon as possible. Mr. Puhl has asked that I let him know in advance of the public meeting if possible. Thank you for your help in this matter.

SW:
Attach.(2)
pc: R. Hancock w/ attach.
S. Koczerzuk " "
A. Martin " "
A. Iglehart " "

THOMAS MAC MIDDLETON, PRESIDENT
MURRAY D. LEVY
NANCY J. SEFTON

MELVIN S. BRIDGETT
COUNTY ADMINISTRATOR

County Commissioners of Charles County

P. O. BOX B
LA PLATA, MARYLAND 20646
(301) 645-0550 OR D.C. 870-3000

PUBLIC NOTICE

NOTE: THIS NOTICE SUPERCEDES ANY PREVIOUS PUBLIC NOTICE ON THIS PROJECT

The Charles County Commissioners through the Department of Public Works has prepared Supplement No. 1 to the 201 Facilities Plan for the Mattawoman Basin Area. A draft of that Plan is complete and will be on display as of November 16, 1988 at the County libraries in La Plata, Indian Head, and Waldorf, and at the Department of Public Works located in the County Government Building in La Plata, Maryland.

Charles County plans to expand the Mattawoman Wastewater Treatment Facility to a capacity of 15 million gallons per day and to add phosphorus removal facilities which will aid in statewide efforts to clean up the Chesapeake Bay. The actual planning area boundaries set by the State of Maryland include the entire Mattawoman Creek Basin, Waldorf, St. Charles, the Town of Indian Head, and a portion of Prince George's County.

In order for citizens, concerned regulatory agencies, and any interested parties to hear a summary of alternatives and to express their viewpoint on this subject, a Public Meeting will be held on Wednesday, December 7, 1988 at 7:00 p.m. in the Auditorium for the Charles County Government Building, in La Plata, Maryland.

Written comments or oral presentations can be presented at this meeting. All public comments will be given due consideration. Statements can be mailed in advance to the address shown below. For more information contact:

Susan Weber
Charles Co. Dept. of Public Works
P.O. Box 1630
La Plata, Maryland 20646
(301) 645-0610 or 870-3935

COUNTY COMMISISONERS OF
CHARLES COUNTY, MARYLAND

THOMAS MAC MIDDLETON
PRESIDENT

TO BE PUBLISHED IN THE MARYLAND INDEPENDENT, AND TIMES CRESCENT ON
NOVEMBER 16th, 23rd, 30th and DECEMBER 7th, 1988

Chesapeake Bay Commission

ISSUES AND ACTIONS

A legislative commission serving Maryland, Pennsylvania and Virginia

Non-Tidal Wetlands Protection Programs for the Chesapeake Bay Region:

A Review and Comparison

The Chesapeake Bay Commission was formed in order to assist the legislatures of Virginia, Maryland and Pennsylvania in evaluating and responding to problems of Bay-wide concern. Furthermore, the Commission encourages, whenever possible, cooperative, coordinated resource planning approaches among the states to ensure the best protection for the living resources of the Bay.

The 1987 Chesapeake Bay Agreement calls for the formulation of a Bay-wide strategy to protect the non-tidal wetlands of the Chesapeake drainage basin. This challenge presents an unusual opportunity for each signatory to coordinate and, whenever appropriate and feasible, adopt a similar approach.

This document reviews the approach that each state is currently considering or implementing. Based on our analysis, we have made a series of recommendations which, if adopted, will improve our region's non-tidal wetlands protection programs. We hope that each state will strongly consider these suggestions as they work toward the adoption or enhancement of state non-tidal wetlands protection strategies.

Introduction

The past thirty years have seen a remarkable increase, both in this country and abroad, in the general awareness of and appreciation for the environment and its relation to the quality of human life. With this growing concern for the human ecology has come the clear realization of the need to provide special protection for certain natural areas which, because of their fragile nature or physiographic position, are particularly vulnerable to the development pressures imposed upon them. One area which has received a great deal of attention in this regard is our nation's wetlands. This has been particularly apparent in the Chesapeake Bay watershed.

Historically, wetlands and marshes were viewed by many as unsightly nuisances serving primarily as breeding grounds for snakes and mosquitoes. Their importance to wildlife, water quality and flood control was largely unappreciated, if not ignored. They were, instead, regarded as areas of minimal utility ideally suited for bulkheading, dredging, draining and filling to create housing developments, industrial sites, marginally productive agricultural lands, waterfront property and even public landfills. Wetlands were used for these purposes with little concern for or knowledge of their impact on broader water resource systems.

Fortunately, this "wetlands as wastelands" philosophy has, in large measure, been replaced by a more enlightened view of wetlands as one of the most diverse and productive ecosystems on earth. In the Chesapeake Bay region, we are beginning to recognize wetlands as vital to the well-being of the Bay and its living resources. They are now recog-

60 West Street, Suite 200 Annapolis, Maryland 21401 (301) 263-3420

nized as important natural resources not only to citizens living in close proximity to them, but also to others living outside the region who consume or utilize products produced within or dependent upon them.

If left undisturbed, the wetlands of the Chesapeake—those marshes, mudflats, swamps and bogs lying at the interface of the land and water—play an important role in the maintenance of surface water quality and the provision of extraordinarily diverse fish and wildlife habitat. Wetlands provide many benefits including, among others:

1. habitat for waterfowl and other wildlife
2. pollution control
3. flood damage protection
4. erosion control
5. natural products for human use
6. food production and aquatic productivity
7. habitat for rare and endangered species
8. recreation and aesthetics
9. water supply
10. education and research

Created, or "artificial", wetlands, because of their buffering and assimilative capacities, are now used experimentally in innovative wastewater and industrial discharge treatment in many areas throughout the country. Wetlands are also expected to be incorporated as a major element of comprehensive nonpoint source pollution control programs under Section 319 of the Water Quality Act of 1987. These factors, coupled with a renewed interest in natural resource conservation, have combined to focus the attention of scientists, legislators and citizens upon the protection of coastal, estuarine and inland wetlands.

Massachusetts, in 1963, was the first state to adopt a statute providing explicit regulatory protection for coastal wetlands. Since that time, almost all coastal states have adopted legislative or regulatory programs designed to protect marine and estuarine wetlands. Maryland, Virginia and Delaware have had successful tidal wetlands protection programs in place since the early 1970's. There are no tidal wetlands within the Chesapeake Bay drainage basin in Pennsylvania.

To date, inland non-tidal wetlands have not been afforded the same degree of attention or protection. The leaders of the Chesapeake Bay clean-up program recognized this shortfall and agreed to rectify the problem. The 1987 Chesapeake Bay Agreement specifically calls for the development of programs to improve the protection of non-tidal wetlands. Under the Living Resources commitments, the signatories agreed to develop, by December 1988, a Bay-wide policy for the protection of tidal and non-tidal wetlands. Within the context of the Population Growth and Development commitments, the signatories are charged with providing incentives, technical assistance and guidance to local governments to actively encourage them to incorporate the protection of tidal and non-tidal wetlands and other fragile areas into the growth-related management process.

The Chesapeake Bay Commission, and many other groups, have long advocated the development of appropriate protection and enhancement programs for inland non-tidal wetlands. As a signatory to the Agreement, the Chesapeake Bay Commission believes the time has come to take action and develop strong state non-tidal wetlands protection programs. The Bay-wide policy for the protection of tidal and non-tidal wetlands is currently being developed, and Maryland, Virginia and Pennsylvania are each re-evaluating current inland, non-tidal wetlands protection programs in light of this commitment. Delaware, while not a signatory to the Bay Agreement, has also made a commitment to bolster the state's non-tidal wetlands protection programs.

The Nature of Non-tidal Wetlands in the Chesapeake Bay Region

In June of 1987, the Chesapeake Bay Wetlands System received world recognition by being nominated for listing as "Wetlands of International Importance Especially as Waterfowl Habitat" under a 45-nation treaty. The Chesapeake Bay Wetlands system was presented as one of the most important wetland areas in the United States because of its value as habitat for endangered species and over a million waterfowl, and for finfish and shellfish productivity recreation, and commerce.

Inland wetlands in the Chesapeake Bay watershed are generally freshwater marshes, swamps and bogs that are largely non-tidal. They usually occur on floodplains along rivers and streams, along the margins of lakes and ponds, and in isolated depressions in the upland. Three types are most common: (1) emergent wetlands, (2)shrub wetlands, and (3) forested wetlands. Forested wetlands are, by far, the most common type. Red maple, silver maple, black gum, and willow oak are among the common trees in forested wetlands. Bald cypress is most abundant in southeastern Virginia, but is also common in eastern Maryland. Commonly found shrubs include buttonbush, swamp rose and silky dogwood. Meadowsweet and leatherleaf are more typical of shrub swamps at higher elevations in the Appalachian Highlands of Pennsylvania and western Maryland. Emergent wetlands are dominated by a number of herbaceous plants including broad-leaved cattail, canary grass, soft rush, sedges and smartweeds.

Status and Recent Trends of Wetlands in the Watershed

The most recent comprehensive information on the current status and recent trends in wetlands for the five-state Mid-Atlantic region is found in a study conducted jointly by the U.S. Fish and Wildlife Service and the Environmental Protection Agency as one element of the National Wetlands Inventory. Using a statistical sampling design, researchers determined wetlands changes for the region between the mid-1950's and the late 1970's. The five-state region had slightly more than two million acres of wetlands in the late 1970's. Virginia, with nearly half (46%) of the region's wetlands, had the greatest wetland acreage among the states, followed by Pennsylvania (22%) and Maryland (19%). The remainder of the wetlands in the region were found in Delaware (9%) and mountainous West Virginia (4%). About 1.2 million acres of wetlands were located within the Chesapeake Bay drainage area. Over 75% of these wetlands are inland wetlands and about 20% are coastal wetlands.

Between the mid-1950's and the late 1970's, the region experienced net losses in its most important wetland types (estuarine and palustrine vegetated wetlands) and substantial net gains in ponds and larger water bodies (lakes and reservoirs). Inland vegetated wetlands suffered the greatest net losses during the period, amounting to almost 133,000 acres, or about seven percent of those present in the mid-1950's. Virginia experienced the greatest actual losses of inland vegetated wetlands (57,000 acres), while Delaware lost the highest percentage of non-tidal wetlands (21% of their resource or 38,000 acres). Agricultural conversion of these wetlands and associated channelization projects were the major reasons for the declines, accounting for nearly 60% of the losses. The magnitude and principal causes of vegetated non-tidal wetlands losses on a Bay-wide basis, and for each of the states, is summarized by the chart on the following page.

Summary of Recent Wetland Trends

It is clear that significant wetland losses have occurred in the near recent past in the Chesapeake Bay region. Between the mid-1950's and the late 1970's seven percent of the inland vegetative wetlands within the Chesapeake Bay watershed were lost. This trend continues to this day.

Unfortunately, many of man's activities are physically and/or functionally destructive to wetlands. Some actions do, however, create wetlands. Construction of farm ponds in upland areas, for instance, may increase wetlands acreage. Restoration of previously drained wetlands can also be beneficial. The major man-induced causes of non-tidal wetlands change in the Chesapeake Bay watershed are as follows:

1. Agriculture—draining and clearing wetlands for crop production.
2. Pond and lake construction—impounding or excavating and flooding wetlands for water supply, flood protection, recreation, and other purposes.
3. Urban development—filling wetlands for houses, industrial facilities, ports, commercial buildings, highways, waste disposal sites, airports, and other purposes.
4. Other development—primarily dredging or channelizing wetlands for navigation and flood protection which often facilitates timber harvest, or wetland conversion to farmland and urban land; silviculture; peat, coal, sand and gravel mining; and altering natural drainage patterns.
5. Pollution—degrading the quality of wetlands by direct or indirect discharge of various materials including pesticides, herbicides, other chemicals, sediment, domestic sewage, and agricultural wastes.

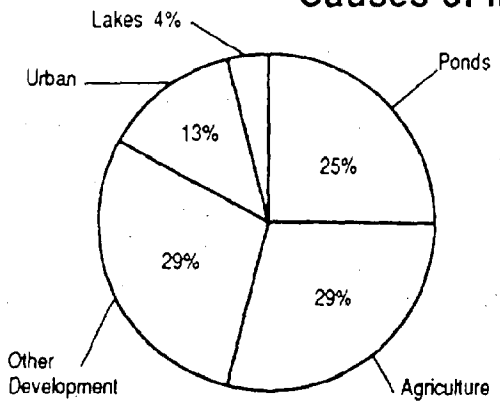
In addition to these man-induced changes, nature also plays a significant role in changing the abundance, function and distribution of our wetlands. Natural forces such as the subsidence of coastal areas related to rising sea level, erosion and accretion, natural succession from one wetland type to another, droughts and other climatic variables can all contribute to the changing character of our wetlands resource. In some instances these events can be managed and their impacts ameliorated but they cannot be controlled in any absolute sense. These natural forces, however, are constantly fluctuating and tend to equalize one another; they do not contribute significantly to the overall resource loss. The activities of man, on the other hand, have continued without redress, resulting in a cumulative and accelerating loss of this valuable and finite resource.

Existing State and Federal Non-tidal Wetlands Protection Efforts

Relatively few states have adopted regulatory programs designed explicitly for the protection of non-tidal wetlands. These states include, for instance, Massachusetts, Connecticut, Rhode Island, Minnesota, Michigan, New Hampshire, New York and New Jersey. Some states (e.g., New Hampshire and Rhode Island) regulate both coastal and inland wetlands through State permit requirements. Others, such as New York, Connecticut and Michigan, establish standards to guide locally-administered wetlands protection programs and directly regulate areas only in the event of local inaction.

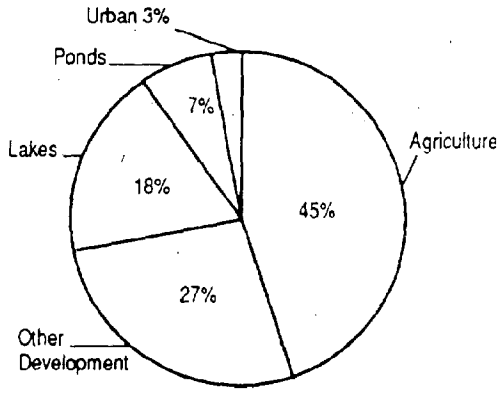
The dominant force in the non-tidal wetlands regulatory framework, to date, has been the federal government. The history of federal involvement in the wetlands regulatory scheme has been long and

Causes of Inland Vegetated Wetland Losses



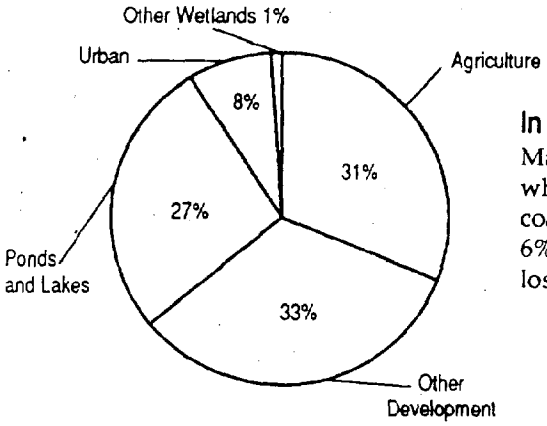
In the Chesapeake Watershed

About 1.2 million acres of wetlands, more than 75% of which are inland wetlands, are found within the Chesapeake Bay drainage area which encompasses parts of six states. Annual losses of coastal and inland vegetated wetlands between the mid-1950's and the late 1970's averaged more than 2800 acres. Inland vegetated wetlands declined by 6%. Agriculture and other development, mainly channelization related to farming, were responsible for nearly 60% of the loss.



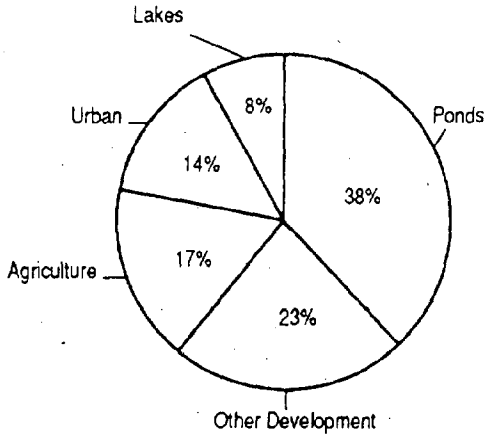
In Virginia

Virginia has slightly more than one million acres of wetlands, more than 75% of which are inland wetlands. Between 1956 and 1977, over 63,000 acres of coastal and inland vegetated wetlands were lost. Inland forested wetlands were most threatened, experiencing a 9% loss in 21 years. Direct conversion of wetlands to cropland accounted for almost one-half of the loss of inland vegetated wetlands.



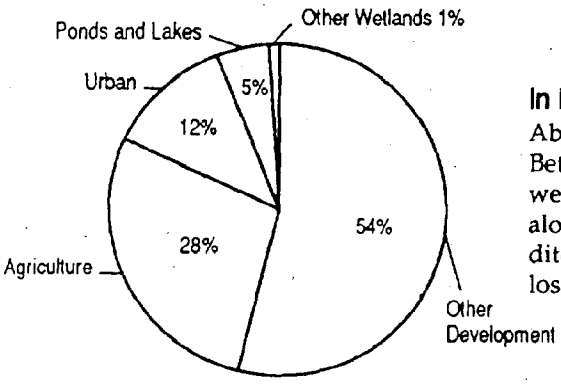
In Maryland

Maryland possesses nearly 440,000 acres of wetlands, about two-thirds of which are inland wetlands. Between 1955 and 1978, about 24,000 acres of coastal and inland wetlands were lost. Inland vegetated wetlands decreased by 6%. Other development and agriculture caused nearly two-thirds of the recent loss.



In Pennsylvania

Nearly 500,000 acres of wetlands are present in Pennsylvania. Forested and shrub wetlands comprise slightly less than 75% of the total. The state experienced a net loss of nearly 28,000 acres of inland vegetated wetlands between 1956 and 1979 for a 6% loss. Pond construction was the greatest cause of vegetated wetlands loss in Pennsylvania. Other development, primarily channelization and peat mining, was responsible for nearly a quarter of the recent losses.



In Delaware

About 17%, or roughly 216,000 acres of the state's land area is wetland. Between 1955 and 1981, about 42,000 acres of coastal and inland vegetated wetlands were lost, the vast majority being inland wetlands. Forested wetlands alone decreased by about 17%. Other development, mainly channelization and ditching projects related to agriculture, were responsible for over 50% of the losses.

Source: U.S. Fish and Wildlife Service. Mid-Atlantic Wetlands, A Disappearing Natural Treasure

controversial. Section 404 of the Federal Water Pollution Control Act of 1972 requires that permits be obtained from the U.S. Army Corps of Engineers for the discharge of dredged and fill materials into the "waters of the United States".

In keeping with the historical focus of the Corps on issues pertaining primarily to navigation, this Section was at first interpreted narrowly by the agency to apply only to traditionally navigable waters. The judiciary, however, has consistently and significantly broadened the interpretation of "waters of the United States" to include adjacent wetlands and other inter-related components of the ecosystem.

The U.S. Environmental Protection Agency is also closely involved in the wetlands regulatory process, having developed, pursuant to Section 404 (b)(1) of the Clean Water Act, guidelines for the discharge of dredged and fill material. The guidelines, while not strictly binding, are given a great deal of weight, and decisions which do not adequately consider the guidelines have been challenged in court. EPA also has an ultimate veto authority within the regulatory framework.

Through the Fish and Wildlife Coordination Act and National Environmental Policy Act (NEPA) guidelines, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service also have input to the decision-making process regarding wetlands. Thus, at least four federal agencies are routinely involved in the wetlands regulatory process. Each has different concerns and different priorities and their legislative mandates are interpreted differently.

The EPA and the Corps differ on the functional definition of a wetland, giving rise to frequent jurisdictional disputes. Basic policy differences also exist in the areas of appropriate mitigation measures and the advanced identification of wetlands of significance which should not be disturbed under any circumstances.

To compound the issue in the Chesapeake Bay region, thre Corps Districts exercise jurisdiction in various areas of the Bay and decisions among the Districts are not always consistent, nor are they able to review a given project proposal from a Bay-wide perspective. The Chief of the Baltimore District of the Corps of Engineers, for instance, citing a lack of sufficient resources, has recently requested and received permission to no longer consider wooded swamps as areas to be included within the purview of Section 404 of the Clean Water Act. This action, combined with the poorly defined and overlapping jurisdictional questions outlined above, serve only to underscore the need for state action in the protection of non-tidal wetland areas.

The lack of an explicit state non-tidal wetlands protection act, however, does not mean that the resource is totally unprotected at the state level. In some states, inland wetlands regulation is a component or an indirect result of broader state regulatory efforts applying to state waters, shorelands, floodplains, wild and scenic rivers, or other areas. State floodplain regulations or state standards for local regulation, for example, have been adopted in more than 30 states. While protection of ecological values is rarely a specific objective of these programs, a significant measure of wetlands protection may in fact be achieved by the very restrictive controls typically applied in floodway areas.

Non-regulatory wetland protection efforts may also provide a valuable supplement to regulatory programs. All states have adopted wildlife protection and conservation programs, many of which involve the acquisition and management of wetland resources. Some states and universities have acquired wetlands for educational and scientific purposes and many have authorized tax relief or conservation easement programs for wetland and open space areas.

There are, then, many existing models for the State protection of non-tidal wetlands. Obviously, the most appropriate model for a given state will depend on a combination of existing programs and political philosophies and the specific hydrologic, geographic, economic and biological characteristics of an area. The approach which has been taken, and is evolving, in the Chesapeake Bay states incorporates a variety of different approaches.

Current Efforts Undertaken by the Chesapeake Bay States

Each of the states within the Chesapeake Bay region has recognized the importance of protecting our remaining inland, non-tidal wetland resource and has taken steps toward developing a practical, reasonable and enforceable solution. The matrix in this publication provides an overview of each state's approach in general terms.

Virginia adopted a tidal wetlands law in 1972 which includes a model wetlands protection ordinance for adoption and administration by local governments in Tidewater Virginia, an area which includes 46 cities, counties and towns essentially lying east of the fall line. The original Act has subsequently been amended substantively to include protective measures for non-vegetated tidal wetlands and coastal primary sand dunes. A non-tidal wetlands statute was drafted and introduced during the 1988 Session of the Virginia General Assembly, at least partially in response to the signing of the 1987 Chesapeake Bay Agreement. The bill was heavily amended and eventually carried over for re-consideration during the 1989 legislative session. The bill is currently being studied by a legis-

lative Subcommittee. In addition, the Chesapeake Bay Preservation Act, adopted by the General Assembly in 1988, will require local governments to define and protect areas which may be of special importance to Chesapeake Bay water quality. Non-tidal wetlands may well fall within the description of those areas requiring special protection.

Maryland adopted its coastal wetlands protection law in 1970. It is essentially a centralized state permitting program. As a part of the State's Chesapeake Bay Initiatives in 1984, a five-year cooperative program between the state and county governments was established for the protection of non-tidal wetlands. Under the program, the state was to encourage and assist the voluntary efforts of local governments in protecting these resources. A Non-tidal Wetlands Task Force was created in 1987 in order to assist the State in the development of a policy and/or draft legislation by the end of June, 1988. The deliberations of the Task Force resulted in the publication of a draft document entitled "Elements for Possible Inclusion in a Non-tidal Wetlands Statute". That document is currently being reviewed by the Office of the Governor. The criteria adopted pursuant to the Chesapeake Bay Critical Area Act also contain guidelines for the protection of non-tidal wetlands within the 1000-foot Critical Area.

In Pennsylvania, wetlands protective measures are authorized within the broader regulatory framework provided through the 1978 Dam Safety and Encroachments Act. The Act regulates certain defined fill activities and encroachments into the waters of the state. "Waters of the state" has been construed to include wetlands. The Pennsylvania Department of Environmental Resources is currently undertaking a study to refine and strengthen the Commonwealth's wetlands protection policy. Draft wetlands protection guidelines have been developed which clarify state policy, define those wetlands areas of "exceptional value" which are deserving of special protection, and generally tighten the state regulatory program. It is anticipated that these guidelines, when finalized, will be incorporated into state law.

The 1973 Delaware Wetlands Act exempts most non-tidal wetlands from regulation, though some very large tracts of freshwater wetlands are protected from certain activities under the statute. The Governor, however, has recently declared his intention to develop a more comprehensive freshwater wetlands conservation program for the state. An Executive Order issued in May of 1988 mandates state agencies to minimize the adverse impacts of their activities on freshwater wetlands. Furthermore, Governor Castle has directed the Department of Natural Resources and Environmental Control to develop a non-tidal wetlands conservation program covering all state held lands. Finally, the Executive Order calls for the creation of a "Freshwater Wetlands Roundtable" that will be responsible for the development of a program that will further conserve Delaware's wetland resources on privately-held lands.

A Comparison of the State Efforts

The accompanying matrix represents an attempt to analyze, as clearly and succinctly as possible, the current status of non-tidal wetlands protection programs in the Chesapeake Bay watershed. It also includes the Chesapeake Bay Commission staff's best assessment and recommendations of elements which are necessary to afford adequate protection to the non-tidal wetland resources of the region.

The wetlands protection programs in each of the jurisdictions are currently in a dynamic and evolving state, each at various stages of modification or development. It is anticipated that the recommendations contained herein will be seriously considered by each state, and incorporated whenever and wherever possible.

Staff has elected to include neighboring Delaware in this analysis because of that state's emerging interest in the Bay restoration and protection programs, and because its wetlands policy review coincides closely with the efforts of the member states of the Chesapeake Bay Commission.

The signing of the Chesapeake Bay Agreement in December of 1987 lends an air of immediacy to the importance of these efforts. Because of the commitments in the Agreement, and because the states are currently following parallel tracks in the development of non-tidal wetlands protection programs, the Chesapeake Bay Commission has a unique opportunity to ensure not only that the resource is afforded the protection which it deserves but also that the approach taken, in so far as possible, represents a truly compatible and Bay-wide perspective toward resource protection.

Chesapeake Bay Non-Tidal Wetlands Protection Programs

An Analysis and Recommendations

Status of Programs as of August 26, 1988

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
1. Legislation - Enacted? (if so, when)	Introduced in 1988. Carried over for vote in 1989 Session.	Proposed for introduction during 1989 Session.	No specific statute. Wetlands provisions contained in Dam Safety and Encroachments Act (1978).	1973 Wetlands Act, Chapter 66, Title 7, Delaware Code. Note: The Act exempts most non-tidal wetlands.	In keeping with the 1987 Chesapeake Bay Agreement, each state should enact or amend its non-tidal wetland protection legislation during the 1989 legislative session in order to adhere to the commitments made in the Bay-wide wetlands policy.
2. Overall Goals	To regulate activities which may "adversely affect" non-tidal wetlands. "Adversely affect" means to substantially impair the ability of a wetland to function for water quality protection, flood protection, or aquifer recharge.	Work toward a net resource gain in non-tidal wetlands acreage and function over present conditions.	Statute and regulations have no specific goals for wetlands protection. New Department of Environmental Resources Wetlands Protection Policy, currently being developed, does speak specifically to this point.	Current law includes the overall goal to preserve and protect the productive wetlands of the state consistent with the historic right of private ownership of lands. Under May 26, 1988 Executive Order 56 Freshwater Wetlands, each state agency must minimize the adverse effects and conserve and enhance the values and functions of Freshwater Wetlands in carrying out the Agency's responsibilities. Develop a Freshwater Wetlands conservation program. (A) The Department of Natural Resources and Environmental Control will develop a program for State held lands. (B) A Freshwater Wetlands Roundtable appointed by the Governor will develop a program for privately held lands.	At a minimum, the goals and policies of a state's non-tidal wetlands program should be clearly defined and explicitly stated, and should focus on preventing further loss and degradation (eliminating all unnecessary losses) of the state's non-tidal wetlands resources. The overall goal should be to work toward a net resource gain.

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
3. Geographical Area	Tidewater Virginia as defined by Code. This includes 46 cities, counties and towns, basically comprising that area which is east of the fall line.	Statewide	Statewide	Statewide but definition exempts most non-tidal wetlands.	The non-tidal wetlands program should be applied statewide to all wetlands greater than one-half acre.
4. Definition of a Non-Tidal Wetland	Any area adjacent to state waters, or isolated areas larger than one acre which has hydric soils, is recurrently inundated or saturated and exhibits hydrology as expressed in U.S. Army Corps of Engineers Wetlands Delineation Manual, and supports a prevalence of vegetation identified as wetlands by the U.S. Fish and Wildlife Service. Non-tidal wetlands may include but are not limited to bogs, marshes, and swamps, but shall not include backwater areas unintentionally created by roadway fills. Areas regulated under the tidal wetlands statute are specifically excluded from the definition.	Area inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and normally does support, hydrophytic vegetation; Department of Natural Resources to use hydrology, soils and vegetation approach contained in EPA Wetlands Identification and Delineation Manual; also defines "non-tidal wetlands of special State concern".	Area inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and normally does support, prevalence of vegetation adapted for life in saturated soils; also defines "important wetlands".	Current law includes those areas not used for agricultural purposes containing 400 acres or more of contiguous non-tidal swamp, bog, muck or marsh exclusive of narrow stream valleys. Under Executive Order 56, the Freshwater Wetlands Roundtable must include a definition of a non-tidal wetland in their report to the Governor June 1, 1989.	At a minimum, the definition should include all those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. This definition generally includes swamps, marshes, bogs, and similar areas and is used by the U.S. Army Corps of Engineers and the Environmental Protection Agency when implementing the Clean Water Act, Section 404 program. A non-tidal wetland protection program should also include definitions for "non-tidal wetlands of special State concern" and "isolated wetlands".
5. Timeline(s) for Adopting Program	Carryover legislation so timelines are out of date. Intent: Develop forestry best management practices by April 1 of the year following passage; certification for exemptions by January 1 of the next year.	Not specified	N/A	Freshwater Wetlands Conservation Program recommendation due to Governor by June 1, 1989.	Legislation should be enacted during the 1989 General Assembly sessions. Corresponding regulations should be promulgated by July, 1990; maps and inventory information should be finalized by December 1990; and local programs should be in place or assumed by July, 1991.

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
6. Inventory/Maps (source, availability, scale, application)	USFWS National Wetlands Inventory Maps complete. Supplemental soil maps available through Division of Soil and Water Conservation by 1990. VIRGIS maps of Tidewater and USFWS maps will also be utilized.	Department of Natural Resources to prepare guidance maps of non-tidal wetlands at scale no less than 1":2000' within 180 days of effective date; may be based on USFWS National Wetlands Inventory Maps.	USFWS National Wetlands Inventory Maps	Interim U.S. Fish and Wildlife Service's National Wetlands Inventory and Maps will be used. Scale = 1":24,000'.	The USFWS National Wetlands Inventory maps at a scale of 1":24,000' are available to all Bay states and can be used to identify most areas 1.5-2 acres or greater in size. Within or adjacent to these general vicinities, field inspection must be used as the final and determinative factor. Overall, the inventory and maps must be at an appropriate scale to allow adequate inspection and enforcement in wetlands of one-half acre or larger in size.
7. State Program or State Overview?	State program with option for local administration through state certification procedure. State may rescind local administration if local fails to remain in compliance with state requirements.	State program with delegation to authorized locals; locals may be more strict. Local jurisdiction may amend an approved regulation with Departmental approval (no public review provisions). State may rescind local delegation if local fails to remain in compliance with State requirements.	State program	State program	The program should be developed at the state level with provisions for local (county, city or town) assumption of the program through a certification process. The local jurisdiction, with proper public review, should be permitted to implement more stringent protection guidelines. Failure of the county, city or town to remain in compliance with the requirements of the state program should result in the state's rescission of delegation.
8. Lead Agency	Department of Forestry and Department of Conservation and Historic Resources.	Department of Natural Resources	Bureau of Dams and Waterway Management, Department of Environmental Resources	Department of Natural Resources and Environmental Control	To be determined by each jurisdiction.
9. Buffer Requirements	None specified though best management practices could require the establishment of buffers.	25 feet; may be expanded by Department of Natural Resources or local jurisdiction based on slope, soils, adjacent development, etc.	300 feet for "important wetlands". 100 feet (waivable) for wild and scenic rivers, federal wilderness areas, rare and endangered species habitat.	Current law none Sussex County has a 20 foot wetland buffer requirement from tidal wetlands.	Programs should include a buffer requirement to ensure that non-tidal wetlands are protected from adjacent upland land-use practices. Scientific evidence suggests that a buffer of 60-100 feet is necessary to ensure adequate protection.

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
10. Agricultural Components	Agricultural activities that may adversely affect wetlands to use best management practices to be promulgated by Department.	Permit not required for (1) activities in accordance with public drainage regulation; (2) existing activities where flow capacity not increased; (3) new activities involving regulated activities to be in accordance with approved Soil Conservation and Water Quality Plan having non-tidal wetlands management component. Other activities would require approval through regulations yet to be determined.	Statute addressing discharge of fill material specifically excludes "plowing, cultivating, seeding and harvesting for the production of food fiber and forest products".	Agricultural lands exempt under current laws; grazing, haying, hunting and trapping are permissible uses.	Legislation should include the creation of an Advisory Board/Task Force to establish Best Management Practices for agricultural activities to be conducted in close proximity to non-tidal wetlands. The Task Force should be comprised of representatives from the forestry, agriculture and environmental community as well as the lead state agencies. It should be charged with the continuing oversight of practices affecting non-tidal wetlands with particular attention to cumulative, sub-watershed impacts. Best management practices developed by the Task Force should be mandatory for all non-exempted activities. Permits should be required for all new conversions of areas with no historical use within a reasonable timeframe (e.g. 10 years) to be determined by each jurisdiction.
11. Forestry Components	Silvicultural activities to be allowed provided that best management practices are implemented. These best management practices shall be promulgated by the Department of Forestry.	Practices in areas larger than 5000 square feet and which require an erosion and sediment control plan must incorporate non-tidal wetlands management component into plan; non-tidal wetlands component of plan not yet defined; plan must specify best management practices and forestry procedures to protect ecological integrity of non-tidal wetlands. Other activities would require approval through regulations yet to be determined.	Statute addressing discharge of fill material specifically excludes "plowing, cultivating, seeding and harvesting for the production of food fiber and forest products".	Current law 400 acres or more are included in statute.	Same as Agriculture.

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
12. Relationship to Tidal Wetlands Protection Program	Same geographic area. Different agencies and permits. No overlap in programs or requirement for cross-review. Exempted activities under both programs similar; the exemptions for agricultural activities are more expansive in the Tidal Wetlands Program.	Both administered by Department of Natural Resources. Tidal wetlands specifically excluded from this program. More local involvement (i.e., delegation) in non-tidal program. Non-tidal wetlands covered under Maryland Critical Area Program are also excluded.	N/A. Only tidal wetlands are in Delaware River Basin.	Current non-tidal wetlands program is part of the Wetlands Act of 1973 which is primarily for protection of tidal wetlands.	Tidal and non-tidal wetlands should be afforded similar levels of protection and adequate interaction among the administering agencies should be ensured when two or more agencies are involved.
13. Relationship to Other Existing State and Federal Regulatory Programs	Establishes new state permit system; best management practices for forestry to be required; Division of Soil and Water Conservation to consult with other agencies regarding protection of non-tidal wetlands and coordinate regulatory process with any federal, state or local agency having jurisdiction; Division to pursue assumption of federal authority for regulation of non-tidal wetlands in Virginia.	Department of Natural Resources to develop agreements with state and federal agencies to coordinate with existing programs including water quality certification, waterway permits, mining permits, stormwater management and sediment control, coastal zone management consistency and Section 404 of Clean Water Act.	No delegation of 404 program. Joint permit application with federal agencies; share information but no joint review.	Delaware hosts monthly Corps of Engineers Joint Permit Processing Committee meetings for coordination with several Federal and State programs.	To assure close coordination between State non-tidal wetland protection programs and other state and federal regulatory programs, the administering agency should be required to develop cooperative agreements with state and federal agencies concerning coordination with existing programs such as water quality certification, erosion and sediment control, coastal zone management consistency, Section 404 of the Clean Water Act, surface mining permits and other programs as appropriate.
14. Permits for Regulated Activities	Silvicultural activities do not require a permit. Other activities which adversely affect wetlands require a permit, but legislation includes numerous exemptions.	Dredging or excavation; changing existing drainage; disturbing water table; driving piles or placing obstructions; destruction or removal of plants; activities causing physical or chemical change or introduction of pollutants.	Any encroachment in a wetland requires a permit, including dams and flood control projects.	Current law non-agricultural lands 400 acres or more of contiguous non-tidal swamp, bog, muck or marsh, all tidal wetlands.	A permit should be required for all those non-exempted activities that will adversely affect wetlands. Permits should be issued for activities resulting in unavoidable losses only when they are determined to be in the public interest and when there are no practicable alternatives. Furthermore, any regulated activity undertaken by a state or local unit of government should comply with the terms and provisions of the state program.

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
15. Permit Fees	Director may require a non-refundable fee to recover reasonable administrative costs and require a reasonable performance bond to ensure satisfactory performance of plan or permit.	Department may set fees by regulation.	$50.00	Current law has provisions.	A non-refundable permit fee should be determined by each jurisdiction which recovers all administrative costs of processing the permit application. The requirement of a performance bond is reasonable to ensure satisfactory performance of any plan or permit.
16. Exempted Activities	Piers, boathouses, duck blinds; outdoor recreational activities, normal road repair; construction or maintenance of public utility lines; agriculture and forestry activities which do not convert non-tidal wetlands and which utilize best management practices; construction/maintenance of farm ponds which convert less than 1 acre; silvicultural activities; reestablishment of agricultural activities. *All exemptions with proviso that activities do not adversely affect non-tidal wetlands.*	Repair and maintenance of existing structures, utilities, farm ponds, stormwater management ponds, rights-of-way, railroad beds; isolated non-tidal wetlands less than 1 acre with no significant plant or wildlife value where no alternative exists; non-tidal wetlands within critical area (those covered by specific guidelines of Critical Area regulations); Department of Natural Resources to adopt regulations regarding exemptions from individual permit requirements.	General permit for utility line crossings; agriculture; forestry	Current law exempts non-tidal wetlands less than 400 acres or in agricultural use. Mosquito Control Activities. Construction of directional aids to navigation, duck blinds, footbridges; the placing of boundary stakes, wildlife nesting structures; grazing of domestic animals; haying; hunting; fishing and trapping.	Exempted activities should be limited to those activities that are tied to specific purposes, and could include maintenance of existing structures, utilities, farm ponds, stormwater management structures, rights-of-way and railroad beds, piers and boathouses of open-pile construction, forestry practices involving less than 5000 square feet, and isolated wetlands of less than one acre with no significant plant or wildlife value (to be determined by the administering agency) provided that all appropriate measures are taken to avoid or minimize the impacts on the non-tidal wetland(s) involved.

Category	Virginia	Maryland	Pennsylvania	Delaware	Chesapeake Bay Commission Staff Recommendations
17. Mitigation/ Compensation Provisions	Department to promulgate regulations for mitigation of adverse effects of activities on non-tidal wetlands.	Restoration, creation, enhancement requirements specified. Permitted losses compensated at 1.5:1; illegal losses at least 2:1 by acreage. May be greater than 1.5:1 for loss of function. Alterations of less than 5,000 square feet with no significant adverse impact may be exempt from this section at the discretion of the Department.	Mitigation required for "important wetlands". No compensation.	Current law does not include specific provisions.	Protection standards should provide for a sequential process of avoiding and minimizing impacts. Avoidance should be stressed as the overall goal. Compensation should be explicitly stated and considered a "last-choice" option. Mitigation should be accomplished at the front end of the project, with the plan clearly spelled out *before* a permit is issued. Wetland creation should be timely and should replace the functions of the wetland to be destroyed. Compensation should be at a rate of 1.5:1 for permitted losses and at 2:1 for illegal losses. Compensation ratios could be higher at the discretion of the administering agency, depending upon the type and extent of wetland loss.
18. Penalties for Violations	An administrative civil penalty not to exceed $1,000/day can be imposed for each day of violation. Department may go to court for compliance and recover costs. Circuit court may assess civil penalty not to exceed $10,000/day for each day of violation. Court penalties apply only in cases of knowing and willful violations (Class I misdemeanor).	Issuance of notice of complaint; circuit court injunction; civil penalty up to $10,000 (each day a separate offense); criminal penalty of misdemeanor and up to $25,000 and 1 year for first offense, $50,000 and 2 years for subsequent offense.	Criminal: up to $1,000 and/or 60 days prison, second offense: $500-$5,000, one year prison. Civil: up to $10,000 for willful violations, plus $500 per day violation continued.	Current law - Justices of the Peace Courts $50-$500. Superior Court $500-$10,000 for intentional or knowing violation.	Provisions should be included for both civil and criminal penalties, as well as for the administrative imposition of civil penalties. Penalties should be sufficiently strict to ensure adequate compliance.

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19. Provisions for Public Review	For permitted activities, *governing body has 30 days* to review permit for consistency. Provisions included for public hearings under Administrative Process Act (APA).	During the permit process, *notice of project and opportunity* for hearing upon request. Adjudicatory hearing limited to those aggrieved and those with recorded interest.	None specified	Current law - *Public notice and public* hearing provisions.	Programs should have provisions for public review throughout the development and implementation stages of the program, including, but not limited to, development of the regulations, local assumption of the program, permit applications, and projects where a hearing is requested.
20. Appeals	For silvicultural activities: formal hearing pursuant to APA. Other permitted activities: appeals made to Department of Forestry.	According to Administrative Procedures Act. Request for hearing on permit decision or notice of corrective action may come from aggrieved party or person served with penalty or *notice of corrective* action.	30 days Environmental Hearing Board	Current law - Environmental Appeals Board consisting of 7 voting Delaware residents appointed by the Governor with consent of the Senate.	The appeals process should be according to Administrative Procedures Act and the judicial requirements in each jurisdiction. Each state program should make clear provisions to provide for citizen suits.
21. Staffing Needs	Estimated additional staff of 22: Department of Conservation and Historic Resources 11 Department of Forestry 11 Very tentative estimates at this point. Much depends on local option provisions for administration.	A maximum of 39 total staff, to be phased in over a 3-year period: 16 permit review 4 clerical 14 enforcement 1 attorney 2 mitigators/plan review 2 mapping 1st year budget estimate: *$675,000 salaries; $350,000* mapping This is a very tentative estimate, assuming total state administration of program.	Currently increasing from 3 to 6 (central permit review staff).	Current law - 7 full-time equivalents. Freshwater Wetlands program may require a significant increase.	As appropriate for complete and effective program development, administration and enforcement.

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