

Commission Meetings & Corresp.

Apr 1986

MSA-S1832-20

AGENDA

Chesapeake Bay Critical Area Commission
Department of Agriculture
50 Harry S. Truman Parkway
Annapolis, Maryland

April 2, 1986

4:00 - 6:00 p.m.

Approval of Minutes
from March 5, 1986

Solomon Liss
Chairman

Discussion of Mapping
Policy

Charles Davis
Planner

→ *Tentative Panel Arrangements*
Proposed Regulations to be
Developed/State Agencies/Projects
Review

Solomon Liss, Charles Davis
Kevin Sullivan

Status of Legislation
* Amendments

Solomon Liss,
Ellen Fraites

Economic Baseline Study &
Appointment of Commission Members

Marcus Pollock
Administrative Officer

Old Business

*Steve Samuels
Mark Bundy
Dianne Brown*

Solomon Liss
Chairman

New Business

*Eric Van de Verg.
Kevin Sullivan
Allen Knesse*

Solomon liss
Chairman

* Commission Attendance

*Bob Price
Ron Hichernell*

Next Meeting: May 7, 1986

Department of Agriculture

- action required

CHESAPEAKE BAY CRITICAL AREA COMMISSION

Minutes of Meeting Held
March 5, 1986

The Chesapeake Bay Critical Area Commission met at the Department of Agriculture, Annapolis, Maryland. The meeting was called to order by Chairman Solomon Liss with the following members in attendance:

Shepard Krech, Jr.
Florence Beck Kurdle
Thomas Jarvis
Pieter de Jong for
Robert S. Lynch
Ronald Hickernell
William J. Bostian
Ardath Cade
Ernest Shea for
Wayne Cawley, Jr.

Barbara O'Neill
Samuel E. Turner, Sr.
Lloyd S. Tyler, III
James E. Gutman
Constance Lieder
Parris N. Glendening
Robert Price, Jr.
Albert W. Zahniser
Torrey C. Brown
William Eichbaum

Chairman Liss announced that Mary Walkup was absent due to a pinched nerve and that Robert Lynch was absent since to his wife recently delivered a baby. He requested that the Commission delete the minutes that had previously been mailed to them and that they substitute the minutes distributed to them. He said that the revised minutes clarify the position the Commission had taken on amending the various legislative bills. At the last meeting, there were originally 16 members present but then two left. The position to oppose the Amending Bills was made because the criteria had not yet been acted on and it was considered premature. The position was supported by an 11 to 3 vote. Subsequently, Chairman Liss received a telephone call indicating that the Commission may not have been complying with the By-laws. Since the two members who had left, had heard the discussion, Chairman Liss telephoned them and asked their position and both approved the position taken by the Commission. The new vote is officially 13 in favor, 3 opposed. Chairman Liss then said that he telephoned all of the other Commissioners to ask if they wanted to be on record in support of the position or opposed to it. J. Frank Raley indicated that he wished to abstain and Wayne Cawley took no position. The remaining members telephoned voted in support of the Commission position. Florence Kurdle then indicated that it should be noted on page three of the minutes that Commissioners were given copies of the Bills that were available at that time. The minutes were then approved as corrected.

Dr. Taylor then discussed the requirements of the Commissioners to file ethics disclosures. She said that on February 13th, Torrey Brown had received a letter from Mr. O'Donnell, Chairman of the Ethics Commission. The letter determined that Commissioners were public officials and must file financial disclosure forms. Those forms had been sent to

Lee Epstein then reviewed the issues relating to HB 1495, Intrafamily Transfer and the amendments which had been submitted by Delegate Daniel Long. Delegate McCaffrey had asked the Commission at the Environmental Matters Committee hearing on March 3, 1986, to consider the Bill with its amendments and to vote and take a position on it. Mr. Epstein indicated that the Attorney General's Office was asked to look at the Bill by Delegate Hickson. He said that the Bill provides for the conveyance of up to five parcels of land to immediate family members and that the Amendments added by Delegate Long define who the family members are. Amendments also indicate that once land is subdivided, it would not be allowed to have further subdivision by the family member. He said that the effects of the Bill are still negative in terms of the intent of the Critical Area Commission. What could happen is that the 1/20 density could change to as many as five units on 25 acres. He also said that once land has been conveyed, there is nothing in the Bill to prevent conveyance away from family members. He pointed out three ways in which the criteria provide room for handling family transfers. They include use of TDR's, or the local jurisdiction's permitting some intrafamily transfer and then counting those figures against the growth allocation allotted to that county; or through a variance procedure which could take care of hardship cases. Florence Kurdle said that she opposes intrafamily transfers, indicating that a strong percentage of individuals immediately convey out of the family. In addition the intrafamily transfer process is often used to reduce the requirement for road improvement, and many developments often occur without proper infrastructure. Ronald Hickernell pointed out that this is a very emotional issue, and while the bottom line is not to get around the basic density, was there a way that more flexibility could be provided? Chairman Liss suggested that the Commission might be able to come up with a plan, but not in one day, and that the issue requires further study. James Gutman made a motion that the Commission note that the Bill had been presented, that a quorum was present, that discussion took place, and that the Commission does not believe that the Bill furthers the intent of the Commission or the criteria, and therefore it does not support the Bill. Chairman Liss suggested amending the motion to say that the Bill may be in conflict with the statute and should be deferred for further study. Ardath Cade pointed out that she wants to be sure that the Commission's position does reflect sympathy with the issue, and Mr. Epstein suggested that the final wording should say that the law may be in conflict with the criteria rather than with the Law. The vote on the motion was 14 in favor, 1 opposed, 1 abstention.

Commission members and are available to those members who have not yet received theirs.

Update on Legislation: Chairman Liss said that on February 28th, the Administration Resolution passed the Senate 42 to 4 on third reader. On February 19th and 20th, the amending Bills were reviewed in the Senate Economic and Environmental Affairs Committee. Of the 13 Bills that were reviewed, 11 were defeated, two remained under consideration and they were SB 592 on Density in the RCA, and SB 593 on the definition of Intensely Developed Areas. On February 20th, the House Environmental Matters Committee heard the Administration Resolution and to date, has taken no action. On March 3rd, the House Environmental Matters Committee heard the amending Bills and had taken no action to date.

Ellen Fraites from the Governor's Office, indicated that the House might vote on the Administration Resolution that evening. She said that the House and Senate Leadership had met with the Governor and Chairman Liss and that at this time, they felt that there is support for the Resolution and that the voting on the Legislation to undermine the criteria would be very close. The Governor is sympathetic to the concerns that have been raised with regard to the criteria, but he is very firm in his support for both the Resolution and the 1du/20 acre density. He is aware of the various issues that are being raised and a small sub-group consisting of Ellen Fraites, Dr. Brown, and William Eichbaum will continue to meet with the leadership to see if any changes are possible that will accommodate some of the concerns. She indicated that the Governor will take his primary advice on the criteria from Chairman Liss. She indicated that the Environmental Matters Committee of the House has appointed a work group which is also studying the various Bills. The group consists of:

- Delegate Robert Kramer
- Delegate Paula Hollinger
- Delegate Tim Finan
- Delegate Ronald Guns
- Delegate Samuel Q. Johnson
- Delegate John Parlett.

Ms. Fraites encouraged the Commission members to speak to their Delegates and she also indicated that the citizen's support for the criteria at the Legislative hearings has been strong and diverse. She thanked Jan Hollmann, Ann Pesiri Swanson and Helene Tenner for their assistance on this matter.

Matters still pending: House Bill 1855, presented by Delegate Linton of Charles County, provides that on a parcel-by-parcel basis, there would be an ability to change the Critical Area boundary. Senate Bill 1006, presented by Senator Della would provide for a developer in a Limited Development Area to have the option to prepare an EIS in order to increase density in LDA's, which the Commission would review and Senate Bill 1046 also by Senator Della, has been introduced which says that an EIS can be substituted for increase in density by one unit on any site. The Commission members voted not to support these bills on the same basis as the other bills had been opposed. the vote was 14 infavor of the position, 2 opposed, though William Bostian mentioned that he did not particularly like the bills.

Chairman Liss indicated that the Commissioners have the right to appear at any of the Legislative hearings, and to testify on their own behalf. However, the Commission's position would be presented by either himself, Dr. Taylor, or the Commission staff. Dr. Taylor then said that on March 12th, Senate Bills 1006 and 1046 will be heard.

Charles Davis then discussed the paper which he had submitted with regard to developing a policy for map development and approval. He requested that the Commission review it carefully and provide him with any comments. He indicated that the Commission is going to have to make decisions about the status of the maps with regard to program approval. Florence Kurdle encouraged the Commission to use an early decision process on mapping after the November elections. She also raised another issue with regard to project approval and that is when subdivisions have been waiting for a sewage treatment plan approval and they are then issued, how is the development counted? Chairman Liss encouraged everyone to read the mapping paper and to send comments to Charles Davis. It will be discussed and decisions will be made at the April meeting.

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The next meeting of the Commission will be April 2nd, at the Department of Agriculture building, 50 Harry S. Truman Parkway, Annapolis.

There was no Old Business.

New Business: Florence Kurdle suggested that Commission staff be very clear about how they handle policy on telephone calls, and Dr. Taylor indicated that all citizen requests are forwarded either to local planning and zoning offices or to the Department of State Planning which is handling the interim process review.

There being no further business, the meeting was adjourned.

These minutes were prepared by Helene Tenner.

*Commission
Subcommittee
Development.*

SUBCOMMITTEE ON DEVELOPMENT ACTIVITIES

Minutes of Meeting Held
March 7, 1985

C-4 Conference Room
Tawes State Office Building
Annapolis, Maryland

Attendants:

William Bostian
James E. Gutman
Robert Price, Jr.
Tony Redman
Gene Lauer for
Parris Glendening
William Eichbaum
Jeff Frank

Constance Lieder
Ardath Cade
Pieter DeJong for
Robert Lynch
Charles Davis
Lee Epstein
Judge Liss

There were no additions to the minutes of the Subcommittee meeting of February 21, 1985. There were two changes: Mike Pawlukiewicz did not attend that meeting; Gene Lauer did attend.

The staff distributed written information about the impacts of airports on wildlife and the implications for siting airports within the Critical Area. This information was requested at the previous meeting so that the Subcommittee could decide whether airports would be considered a desirable use within the Critical Area. A decision concerning this matter is to be made at a future meeting.

The staff presented a definition of development activities to be used as a basis for future Subcommittee decisions. It reads as follows:

Development activities are human-activities that result in land disturbances in conjunction with residential, commercial, industrial or institutional construction or alteration. Land disturbances include any impacts to bioproductive habitats, landforms or natural processes.

A list of possible criteria for water-dependent uses was distributed. These criteria will be discussed at the next meeting.

The revised (2/28/85) policy statement was discussed. The staff presented a graph (attached to these minutes) that illustrated the three resource management areas inherent in the policies: Undeveloped Areas, Areas of Limited Development, and Intensely Developed Areas. Much discussion ensued concerning the functional boundaries between these three areas. The boundary between Undeveloped Areas and Areas of Limited Development should be based

Development Activities

Meeting - 3/7/85

page two

upon the distributions of existing land use intensities that are compatible with the conservation of resources having regional significance, e.g., the conservation of productive agricultural lands, forest resource base and the maintenance needs of wildlife populations. If development of low to medium intensity has displaced these features, that area would then be classified as an Area of Limited Development. The boundary between Areas of Limited Development and Intensely Developed Areas should be based on the level of development where the capacity of the local environment to tolerate disturbances has been exceeded and consequently, offsite impacts (i.e., water pollution) have a significant impact on local fish, wildlife or plant habitats and/or water quality. Highly urbanized environments would have such impacts and would, therefore, be considered "Intensely Developed".

Based on these general descriptions, the Subcommittee directed the staff to assemble criteria for development activities in each of these three areas. The Subcommittee requested that the staff mail to them, prior to the next meeting, these criteria and a copy of the graph that conceptually defines these areas.

Draft criteria from the other Subcommittees were distributed. These drafts addressed: forest practices, buffer zones, water-dependent facilities, anadromous fish propagation waters, Areas of State Critical Concern, rare and endangered species. Comments concerning these drafts should be given to the staff so that they can be considered during criteria development by the other Subcommittees.

The next meeting will be held on March 21, 1985, in the C-4 Conference Room, Tawes Building, Annapolis, at 4:30 p.m..

CAD/jjd

A Strategy for Developing Land-Use Criteria for the
Chesapeake Bay Critical Area

Draft 1B
3/21/85

Humans place great demands on the shores of the Chesapeake. Shores are the access points to the Bay for recreation, commerce and fisheries. Bay-front residences are desirable, especially where there is access to recreational waters. Agricultural lands and forests are predominant land uses. Throughout the Bay, the relative intensity and distribution of these various uses complicate any attempt to manage the consequential impacts. How can these variations in land use intensity be addressed comprehensively?

Generally, development intensities (see Figure 1) vary from undeveloped to limited development to intensely developed.

Undeveloped areas are characterized by nature-dominated environments (wetlands, forests, abandoned fields) and resource-utilization activities, such as agriculture, forestry and sand and gravel mining. Transition areas occur as fringe areas around settlements and contain developable land. The level of development intensity throughout the transition area is within the natural capacity of the site to tolerate disturbances. That is, within these areas, existing development is of such low intensity that impacts of development generally do not penetrate beyond the immediate vicinity of the site. The residual, undeveloped habitats are proportionately more common and are able to both buffer impacts of adjacent developments, and provide undisturbed habitat. Intensely developed areas are man-dominated environments characterized by buildings,

roads, waste-handling facilities, and altered landforms and water flow regimes. These areas are developed so intensely that they have supplanted natural habitats and regularly contribute to off-site water quality problems. Because specific types of impacts are associated with each development intensity, solutions that eliminate these impacts will vary from area to area.

Each area poses different challenges for land managers attempting to achieve Chesapeake Bay Critical Area goals. For example, certain objectives for wildlife habitats cannot be achieved within existing intensely developed areas. Similarly, certain land use decisions will preclude the future use of areas regional resource management objectives (i.e., regional biological community diversity). Consequently, for each of these areas it is appropriate to vary the types of programs that will be developed to address Chesapeake Bay Critical Area goals. The types of criteria developed by the Commission should reflect these inherent differences based on existing land use patterns.

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April 2, 1986

CHESAPEAKE BAY CRITICAL AREA
COMMISSION - "HEARINGS"/"MEETINGS"
- ATTENDANCE REQUIREMENT -
VALIDITY OF CRITERIA.

The Honorable Larry Young
Chairman
House Environmental Matters Committee
160 House Office Building
Annapolis, Maryland 21401-1991

Dear Delegate Young:

You have requested our opinion concerning certain provisions in the statute creating the Chesapeake Bay Critical Area Commission. Specifically, you inquire:

- 1) whether the "regional public hearings" required by §8-1808(d)(1) of the Natural Resources Article ("NR" Article) are "meetings of the Commission," for purposes of the requirement in NR §8-1804(c)(6) that Commission members "attend at least 60 percent of the meetings of the Commission" annually; and
- 2) whether the legality of the Commission's criteria for program development would be affected if they were adopted by a quorum composed of members of the Commission who had failed to attend at least 60 percent of Commission meetings.

OPINION OF THE ATTORNEY GENERAL

Cite as: Opinion No. 86-024 (April 2, 1986) (unpublished)

For the reasons stated below, we conclude that:

1) Although the question is a very close one, public hearings held by the Commission need not be counted for purposes of the attendance requirement as "meetings of the Commission."

2) The question of Commission members' compliance with the statutory attendance requirement does not affect the legality of the Commission's criteria. That is, even if it were concluded that a majority of Commission members had failed to attend the required number of meetings, nevertheless those members continue to serve on the Commission and are legally entitled to participate fully in the Commission's actions.

I

Attendance at "Meetings"

A. Background

The Chesapeake Bay Critical Area Commission "consists of 25 voting members" appointed by the Governor. NR §8-1804(a). Eleven Commission members are required to be local government officials. NR §8-1804(a)(2). Five other members are State Executive Department secretaries, serving ex officio. NR §8-1804(a)(4).

In general, the Commission is empowered to superintend the efforts that will be made at the local level to protect the Bay and its environs. See, e.g., NR §§8-1808(a), 8-1809(d)(2), 8-1811, and 8-1814. The Commission has the power, among other things, to "adopt regulations and criteria" and "conduct hearings in connection with policies, proposed programs, and proposed regulations or amendments to regulations." NR §8-1806(1) and (2).

B. Program development criteria

One of the Commission's principal responsibilities was the adoption of criteria for the development and approval of programs in each local jurisdiction, designed to achieve the statutory goals. NR §8-1808. Certain hearings were required to have been held prior to the adoption of the criteria:

"The Commission shall promulgate by regulation on or before December 1, 1985, criteria for program development and approval, which are necessary or appropriate to achieve the standards stated in subsection (b) of this section. Prior to developing its criteria and also prior to adopting its criteria, the Commission shall hold at least 6 regional public hearings, one in each of the following areas:

- (i) Harford, Cecil, and Kent Counties;
- (ii) Queen Anne's, Talbot, and Caroline Counties;
- (iii) Dorchester, Somerset, and Wicomico Counties;
- (iv) Baltimore City and Baltimore County;
- (v) Charles, Calvert, and St. Mary's Counties; and
- (vi) Anne Arundel and Prince George's Counties.

During the hearing process, the Commission shall consult with each affected local jurisdiction." NR S8-1808(d)(1).

As we understand it, the Commission in fact held 16 hearings, instead of the minimum of six required by the statute. The Commission, having been advised by counsel that a quorum was not essential to the convening of these public hearings, did not regard the hearings as Commission business meetings. After the hearings, the Commission - acting at meetings, with a quorum - considered and adopted the criteria. See 12 Md. Reg. 1953 (Sep. 27, 1985) (proposed regulations); 12 Md. Reg. 2352 (Nov. 22, 1985) (final regulations).

C. Construction of "Meetings"

The statute contains the following provision regarding attendance by Commission members:

"Any member of the Commission appointed by the Governor who shall fail to attend at least 60 percent of the meetings of the Commission during any period of 12 consecutive months shall be considered to have resigned, and the chairman shall forward the member's name to the Governor, not later than January 15 of the year following the non-attendance with the statement of the nonattendance, and the Governor shall thereupon appoint a successor for the remainder

of the term. If the member has been unable to attend meetings as required by this subtitle for reasons satisfactory to the Governor, the Governor may waive the resignation if the reasons are made public." NR §8-1804(c)(6).

This provision is closely modeled after Article 41, §4 of the Maryland Code, an attendance requirement that is applicable to members of all State boards and commissions.¹ The only difference is that the minimum attendance requirement applicable to the Commission is 60 percent, rather than the 50 percent generally required of members of State boards and commissions.

Thus, the General Assembly clearly attached considerable importance both to the public hearing process preceding adoption of the criteria, else it would not have specified with such detail the requirements for those hearings; and to diligent attendance by Commission members at meetings, else it would not have increased the otherwise applicable 50 percent attendance requirement to 60 percent. Moreover, the General Assembly might well have understood these two provisions to be linked, so that the attendance requirement for meetings would serve to increase attendance at the hearings. This argument - that "hearings" are "meetings," for purposes of the attendance requirement in NR §8-1804(c)(6) - is strengthened by provisions elsewhere in the statute that authorize the Commission to "appoint a panel of 3 of its members" to conduct other required public hearings. NR §§8-1809(d)(1) and 8-1810(b).

Finally, there is little doubt that, when a public hearing is convened by a quorum of the Commission, or indeed of any other public body, it is subject to the State Open Meetings Law. The term "meet" is defined, for purposes of the Open Meetings Law as follows: "'Meet' means to convene a quorum of a public for the consideration or transaction of public business." §10-501(f) of the State Government Article ("SG" Article). Under SG §10-505(3), "a public body shall meet in open session whenever the public body is carrying out ... a quasi-legislative function."²

¹ "Any member of any State board or commission appointed by the Governor who shall fail to attend at least 50 percent of the meetings of the board or commission of which he is a member during any period of twelve consecutive months shall be considered to have resigned and the chairman of said board or commission shall forward or cause his name to be forwarded to the Governor, not later than January 15 of the year following such non-attendance with the statement of such nonattendance, and the Governor shall thereupon appoint his successor for the remainder of the term. If the member has been unable to attend meetings as required by this section for reasons satisfactory to the Governor, the Governor may waive such resignation if such reasons are made public."

² The phrase "shall meet in open session" in SG §10-505 does not imply that agency (cont'd.)

A "quasi-legislative function" is defined as "the process or act of ... adopting, disapproving, amending or repealing a rule, regulation, or bylaw that has the force of law." SG §10-501(i)(1). The taking of testimony at a public hearing is surely part of "the process ... of ... adopting ... a rule." See City of New Carrollton v. Rogers, 287 Md. 56 (1980).³

Nevertheless, after taking into account these forceful considerations, we still conclude on balance that hearings of the Commission need not be counted for purposes of the requirement in NR §8-1804(c)(6) that Commission members "attend at least 60 percent of the meetings of the Commission."

First, we believe that the breadth of "meeting," for purposes of the Open Meetings Law, is not dispositive of the issue of construction here. See Hills & Dales, Inc. v. City of Wooster, 448 N.E.2d 163, 167 (Ohio App. 1982) (term "public hearings" in city charter provision regarding zoning procedure not the equivalent of term "meetings open to the public" in Sunshine Law). Cf. 70 Opinions of the Attorney General (1985) [Opinion No. 85-016 (June 14, 1985)] (entity might be a State agency for purposes of the Public Information Act but not for other purposes). Obviously a "regional public hearing" must accord with a law intended to open agency meetings to public observation.

But we are not dealing with a question of public access. Rather, the attendance requirement in NR §8-1804(c)(6) is aimed at the Commission members themselves. It is, we think, best read as a device to ensure that Commission decisions in fact reflect the collegial process of a diverse membership. The Commission's membership was carefully devised to bring to its decisionmaking a

members are prohibited from assembling for the functions identified in SG §10-505 unless a quorum is present. The Open Meetings Law sets out certain requirements that an agency must follow once a quorum is present for the consideration or transaction of public business. If the quorum is carrying out one of the functions identified in SG §10-505, it "shall meet in open session"; if it is carrying out one of the functions identified in SG §10-508(a), it "may meet in closed session." The Open Meetings Law does not prescribe the circumstances under which a quorum is required in the first place. See note 4 below...

³ The Rogers case held that even an informal, information-gathering meeting called by a citizen's association, at which a quorum of the city council attended for the purpose of answering questions, was a "meeting" within the meaning of the Open Meetings Law:

"[T]he Act applies, not only to final decisions made by the public body exercising legislative functions at a public meeting, but as well to all deliberations which precede the actual legislative act or decision, unless authorized by [the Open Meetings Law] to be closed to the public." 287 Md. at 72.

range of geographic and substantive interests. NR §8-1804(a). But the intended collegial decisionmaking cannot occur if members are too often absent from sessions at which decisions are made.

However, a quasi-legislative public hearing, by its nature, does not involve the kind of group deliberation and interaction that a collegial body is required to bring to its decisionmaking. A public hearing is intended primarily as a forum for those who wish to express their views. It is also, correspondingly, a means of information for agency members. See County of Nassau v. Metropolitan Transp. Auth., 293 N.Y.S.2d 1017, 1021 (Sup. Ct. 1968), aff'd mem. 301 N.Y.S.2d 432 (App. Div. 1969) ("a quasi-legislative hearing ... can be primarily informational for the hearing body"). But it is not a mode of agency deliberation. To be sure, members of the body might participate in the hearing by posing questions to witnesses, but there is little interaction among the members themselves. Hence, the absence of members from the hearing does not impair the collegial process of decisionmaking, for that process simply does not occur at a hearing.

Indeed, it is a well-settled tenet of administrative law that members of an agency may participate in the decision of a matter, notwithstanding that they did not personally hear the presentation of evidence or argument. "Neither due process of law nor the concept of a full or fair hearing requires that the actual taking of testimony be before the same officers as are to determine the matter involved, and it is common for hearings to be conducted by less than all members of an administrative agency." 2 Am. Jur. 2d Administrative Law §437, at 245 (1962). Accord 3 Davis, Administrative Law §17:2, at 280 (2d ed. 1980). The procedural minimum necessary to ensure a reasoned judgment by decisionmakers is that decisionmakers consider and review all relevant evidence, but this requirement does not mean that they must be present at the actual hearing.⁴ Morgan v. United States, 298 U.S. 468, 481 (1936). As Professor Davis summarized the import of this case and its progeny: "[T]he deciding officers must understand the evidence, and that may be done by reading summaries prepared by the staff or by consultations with the staff." 3 Davis, Administrative Law §17:2, at 280. See also McGraw Elec. Co. v. United States, 120 F. Supp. 354, 357-58 (E.D. Mo.), aff'd 348 U.S. 804 (1954) (ICC decision

⁴ As discussed in Part I B above, counsel to the Commission advised that the presence of a quorum was not a prerequisite to the holding of a public hearing. This advice was based on the principle of administrative law summarized in the text accompanying this note. Moreover, we have found no case that requires the presence of a quorum at a quasi-legislative hearing at which no agency decisionmaking occurs. Thus, we suggest that if the General Assembly desires to assure the presence of a quorum of Commission members at public hearings, it should specify that requirement in the statute. See SG §2-1606(a)(2) (quorum requirement for investigating committee hearings).

on rates properly made by commissioners who had not heard oral argument but who read transcript).⁵

The statute creating the Commission itself reflects an awareness that hearings and meetings do not play the same role in the work of the agency. The two terms are used separately in different places, and the public hearings are not expressly defined as meetings. The Commission members themselves are described as "25 voting members," which suggests that the attendance requirement is a manifestation of the General Assembly's concern about the decisionmaking process - i.e., the "voting" - that would occur at meetings, not hearings. See also NR §8-1812(a) (procedure for disapproving chairman's actions regarding judicial proceedings "by vote at a meeting of the Commission").

A distinction between hearings and meetings also has its practical side, of which the General Assembly was presumably aware. As was to be expected given the tight timetable for the development of the criteria, the regional public hearings of the Commission were bunched at the beginning and near the end of the process. And, as noted in Part I A above, most of the members of the Commission are required by the statute to be public office holders. It was certainly foreseeable that these officials would have other responsibilities that would prevent them from devoting a lengthy, consecutive block of time to a series of public hearings. If hearings had been considered to be part of the attendance requirement for meetings, the result might well have been greater attendance by Commission members at far fewer hearings. This result would have ill-served the legislative intent underlying the required regional public hearings - that the public have as much opportunity as possible to be heard.⁶

Finally, the difference between hearings and meetings is reflected in provisions governing the General Assembly's own investigating committees. "Unless there is a quorum, an investigating committee may not act at any meeting or hold a hearing." SG §2-1606(a)(2). The express inclusion of "hearing," as separately defined in SG §2-1601(b)(1), in this quorum requirement suggests that the term "meeting" alone would not extend the requirement to hearings. Cf. Bouton v. Potomac Edison Co., 282 Md. 142, 152 (1978) (meetings of Public Service Commission personnel with interested persons were not "public hearings," within meaning of Public Service Commission Law). See

⁵ We understand that all public hearings of the Commission were transcribed and available to members who had not attended any particular hearing.

⁶ As it was, Commission members were encouraged (but not required) to attend hearings, and the Commission held more hearings than it was required to.

also Eudaly v. City of Colleyville, 642 S.W.2d 75, 77 (Tex. App. 1982) (distinguishing "public hearings" from "public meetings").

For these reasons, we are of the view that the term "meetings" in NR §8-1804(c)(6) does not extend to the "regional public hearings" required by NR §8-1808(d)(1).

II

Effect of Noncompliance

A. Introduction

As we understand it, if public hearings are not counted as meetings for purposes of the 60 percent attendance requirement, all members of the Commission have met that requirement. If, however, public hearings were to be reckoned as meetings for purposes of the attendance requirement, most members of the Commission would not satisfy the requirement.

As discussed in Part I above, we have concluded that public hearings need not be counted in determining compliance with the attendance requirement. Nevertheless, because the question is a very close one, we think it useful to offer our views on your second question as well: whether the legality of the Commission's criteria for program development and approval would be impaired if they had been adopted by a quorum composed of members of the Commission who had failed to meet the attendance requirement. We conclude that noncompliance by a Commission majority with the attendance requirement in NR §8-1804(c)(6) would have no effect on the legality of the Commission's criteria.

B. The Statutory "Resignation" Procedure

NR §8-1804(c)(6) provides for the "resignation" of a Commission member who fails to meet the 60 percent attendance requirement. But the provision does not swiftly or automatically remove noncomplying members from office and thus create vacancies. On the contrary, the procedure entails four separate steps, all of which must be completed before a noncomplying member ceases to hold office.

First, a "period of twelve consecutive months" must have elapsed and the member's failure to meet the 60 percent attend-

ance requirement must be determined by the Chairman of the Commission.⁷ Second, "the Chairman shall forward the member's name to the Governor not later than January 15 of the year following the nonattendance with the statement of the nonattendance." Third, the Governor must decide whether to "waive the resignation," after considering the reasons for the member's nonattendance. Finally, if the Governor declines to waive the resignation, the Governor "appoints a successor for the remainder of the term." Thus, the noncomplying member's service on the Commission ceases only after the successor qualifies.

Article 41, §4, in virtually identical terms, requires the members of State boards and commissions generally to attend at least 50 percent of their meetings, while authorizing the Governor to waive the resignation otherwise implied from nonattendance. In contrast, Article 41, §4A provides that a board or commission member who is convicted of certain criminal offenses "shall be suspended without pay from participation in the board's or commission's activities during the appeals period. If the conviction becomes final, the member shall be removed from the office and the office shall be deemed vacant." In our view, the sharp contrast between the automatic suspension or removal provided for by Article 41, §4A and the waivable resignation provided for by Article 41, §4 and NR §8-1804(c)(6) reflects a clear legislative intent that "resignation" by virtue of nonattendance at meetings takes effect only if the Governor decides not to waive that resignation.⁸

⁷ The term "period of twelve consecutive months" is ambiguous. It might refer to the annual periods following the Commission's initial meeting, which occurred in October 1984. Alternatively, the phrase might refer to calendar years, even though the life of the Commission in the first year (1984) was much less than 12 months. The Chairman of the Commission has construed the provision to mean the latter and has informed the Governor early each year of compliance with the attendance requirement for the preceding calendar year. Under the Commission's construction of the term "meetings," discussed in Part I above, all members met the attendance requirement.

⁸ This construction is confirmed by the legislative history of Article 41, §4. As originally enacted, the provision required the resignation of any board or commission member "who shall fail to attend the meetings of the Board or Commission of which he is a member for a period of twelve consecutive months." After being notified of this failure, "the Governor shall thereupon appoint his successor for the remainder of the term." There was no provision for excusing the nonattendance. Chapter 329, Laws of Maryland 1947.

In 1964, Article 41, §4 was amended to provide for the 50 percent attendance requirement now in the statute and to add the language giving the Governor the authority to "waive such resignation." The bill title described the latter as "providing for gubernatorial pardon." Chapter 114, Laws of Maryland 1964.

Thus, in our view, the statutory resignation of a Commission member operates essentially like a voluntary resignation, which is ordinarily not effective until it has been accepted. "[A] public officer who submits his resignation is required to perform the duties of his office until his resignation is accepted." Ulrich v. Board of County Comm'rs, 278 Md. 432, 439 (1976).

In the Ulrich case, the Court of Appeals held that a public official's resignation tendered at the request of the county governing body took effect immediately, without the necessity of any formal acceptance. The basis of that holding was "that the acceptance of the resignation was implicit in the request for the resignation." 278 Md. at 440. That is, the governing body had previously determined upon its "willingness to relieve [the official] of the performance of his duties." Id. Under such circumstances, further formal action was unnecessary.

By contrast, formal action on the statutory "resignation" of a Commission member is expressly required by NR §8-1804(c)(6). The Governor must determine whether the member's reasons for nonattendance were satisfactory and whether to "waive the resignation." Put another way, the Governor must determine whether he is willing to accept the member's resignation. Until he does so, that resignation is not effective.⁹

C. The De Facto Officer Doctrine

Even if NR §8-1804(c)(6) were to be properly read as providing for Commission members' automatic and immediate ouster from their positions, the validity of the adoption of the Commission's criteria would be unaffected. If the members who did not attend the requisite number of the Commission's hearings lacked actual authority to participate in the Commission's decisionmaking thereafter, they nonetheless properly exercised such authority as de facto members. "A de facto officer has been defined as one in actual possession of an office under some colorable or apparent authority." Kone v. Baltimore County, 231 Md. 466, 471 (1963). "Where there is a de jure office [i.e., an office is legally authorized], all that is required to make an officer de facto is that the individual claiming the office be in

⁹ As noted in Part I B above, the Commission had received advice of counsel, on the basis of which the regional public hearings were not regarded as meetings, for purposes of the attendance requirement. For the reasons stated in Part II C above, we agree with this reading of the statute. But even if the contrary view were taken, the Commission members' good faith belief that they were not missing a "meeting" when they failed to attend a hearing might well be regarded by the Governor as a satisfactory reason to waive the resignations.

possession of it, performing its duties, and claiming to be such officer under color of right." Grooms v. Lavale Zoning Bd., 27 Md. App. 266, 273-74 (1975). The Court of Appeals has held that "an elected or appointed officer may remain in office at the expiration of his term and is entitled to exercise the powers of the office until his successor qualifies, whether or not the statute creating the office so provides." Reed v. President and Commissioners of North East, 226 Md. 229, 242 (1961).

During the time that the resignation procedure in NR §8-1804(c)(6) goes forward, the affected members are at least de facto members of the Commission. See Reed, 226 Md. at 240 ("[T]he public interest requires, in the absence of any provision to the contrary, that public offices should be filled at all times, without interruption.").

"[A]ll official actions of de facto officers are, upon grounds of public policy and necessity, to be considered as valid and binding as if they had been performed by de jure officers." 226 Md. at 246. Thus, for example, in Kone v. Baltimore County, a disciplinary board convened and headed by a de facto officer was held to have validly and effectively discharged a public employee. See also Reed, 226 Md. at 246 (powers of de facto officers extend to issuance of properly authorized bonds); Grooms, 27 Md. App. at 275 (powers of de facto officers extend to issuance of zoning ordinance and zoning map). By the same token, it is clear that the powers of de facto members of the Chesapeake Bay Critical Areas Commission extend to adoption of the Commission's program development and approval criteria. Therefore, whatever the membership status of the majority of the Commission at the time those criteria were adopted, the action by which they were adopted was fully effective, and the criteria are valid and binding on the public.

III

Conclusion

In summary, it is our opinion that:

1) Although the question is a very close one, public hearings held by the Commission need not be counted for purposes of the statutory attendance requirement as "meetings of the Commission."

2) The question of Commission members' compliance with the statutory attendance requirement does not affect the legality of

The Honorable Larry Young, Chairman
House Environmental Matters Committee
April 2, 1986

12.

the Commission's adopted criteria for local program development and approval. That is, even if one concluded that a majority of Commission members had failed to attend the required number of meetings, nevertheless these members continue to serve on the Commission and are legally entitled to participate fully in the Commission's actions.

Very truly yours,

Stephen H. Sachs /ss

Stephen H. Sachs
Attorney General

Jack Schwartz

Jack Schwartz
Chief Counsel
Opinions and Advice

TENTATIVE PANEL LIST FOR
PUBLIC HEARINGS ON LOCAL PROGRAMS

Revised 4/30/86

~~Call
Anne
Sturgis
Revised~~

Anne Arundel Co.
Annapolis
Highland Beach

Robert Lynch
James E. Gutman
William Eichbaum
Albert W. Zahniser
Shepard Krech

Baltimore City

Clarence "Du" Burns
James E. Gutman
Constance Lieder
William Bostian

~~Barbara O'Neill~~ Solomon Liss

Baltimore Co.

Ronald Hickernell
Solomon Liss
Torrey C. Brown
Clarence "Du" Burns
Samuel Turner

Calvert Co.
Chesapeake Beach
North Beach

Albert W. Zahniser
Harry T. Stine
Ardath Cade
Florence Beck Kurdle
J. Frank Raley, Jr.

Caroline Co.
Denton
Federalsburg
Hillsboro
Greensboro

Wayne Cawley, Jr.
Thomas Jarvis
John Luthy, Jr.
Robert Lynch
Shepard Krech

Cecil Co.
Charlestown
Chesapeake City
Elkton
North East
Perryville
Port Deposit

Barbara O'Neill
Mary Roe Walkup
William Eichbaum
~~Ann Sturgis Coates~~ ~~Shepard Krech~~
Solomon Liss
Samuel Turner

Charles Co.
Indian Head

J. Frank Raley, Jr.
Harry Stine
Albert W. Zahniser
Ardath Cade
Parris Glendening

Dorchester Co.
Brookview
Cambridge
Church Creek
Eldorado
Secretary
Vienna

John Luthy, Jr.
Wayne Cawley, Jr.
Solomon Liss
William Bostian
Robert Price

Harford Co.
~~Aberdeen~~
Havre de Grace

Kent Co.
Betterton
Chestertown
Millington
Rock Hall

Queen Anne's Co.
Centreville
Church Hall
Queen Anne
Queenstown

Prince George's Co.

St. Mary's Co.
Leonardtown

Somerset Co.
Crisfield
Princess Anne

Talbot Co.
Easton
Oxford
St. Michael's

Wicomico Co.
Mardella Springs
Sharptown
Salisbury

Worcester Co.
Pocomoke City
Snow Hill

Florence Beck Kurdle
Ronald Hickernell
Ardath Cade
Barbara O'Neill
Thomas Jarvis

Mary Roe Walkup
Robert Price
Thomas Jarvis
Wayne Cawley, Jr.
~~Solomon Liss~~ Barbara O'Neill

Robert Price
Ronald Hickernell
John Luthy, Jr.
Constance Lieder
Florence Beck Kurdle

Parris Glendening
Torrey C. Brown
J. Frank Raley, Jr.
James Gutman
Harry T. Stine

J. Frank Raley, Jr.
Hary Stine
Albert W. Zahniser
William Eichbaum
Robert Price

Lloyd Tyler, III
Solomon Liss
William Bostian
Ann Sturgis Coates
Wayne Cawley, Jr.

Samuel Turner
Shepard Krech
Mary Roe Walkup
William Eichbaum
Thomas Jarvis

William Bostian
Ardath Cade
Ann Sturgis Coates
Lloyd Tyler, III
Parris Glendening

Ann Sturgis Coates
Lloyd Tyler, III
John Luthy
Torrey C. Brown
Constance Lieder

AGENDA FOR STAFF WORKSHOP

4/16/85

- 9:30 a.m. Coffee and Donuts
- 10:00 a.m. Begin going through what we need to handle for the next year - according to staff and time line - list all items and finish scheduling them.
- Product: Agreed upon work schedule.
- 12:00 Noon Lunch
- 12:45 p.m. Go over support services.
- Product: Agreed upon way the office should function.
- 1:30 p.m. Go over project tracking and program tracking.
- Product: Agreement on both areas with comments to be incorporated.
- 3:15 p.m. Go over reforestation and access outline and time frame.
- Product: Comments to Carolyn for her use.
- 3:45 p.m. to 4:30 p.m. Contract negotiation - local government negotiation.

Other, Issues

Scope of Work - uniform
Budget

- quarterly report.
- product check off

PROGRAM REVIEW PROCEDURES

- (1) Staff person assigned to jurisdiction. (Refer to list)
- (2) ⁵ Commission members assigned to each jurisdiction. (list completed) ^{draft}

Question:

Should we supply "checklist" to jurisdictions so that they know if their submittal is complete? ^{raises}

- (3) ~~Jennifer~~ receives programs. ^{Veronica and Jennifer} Veronica for Marcus
Kevin
Carolyn
+ ~~the~~ Planner III

Question:

- (4) Regional Planners ask if ^{Jennifer for} program submittal complete? ^{Charlie}

Question:

^{Refer to} Regional Planners refer to Charlie's Check list.

~~Does~~ Commission's response period begin on date of complete program submittal? ^X

- (4) ⁵ Date of submittal logged in "program approval log". ^{Dawn handles}
- (5) Program documents given to staff person assigned to that jurisdiction.
- (6) Staff person notifies Commission panel that program has arrived for _____ (jurisdiction) ^{through secretary} to that staff person.
- (7) ~~Staff person~~ ^{Jennifer} arranges meeting date with panel to review materials. ^{and coordinates this with Regional Planner.}
- (8) ~~Staff person~~ ^{Jennifer} makes arrangements for ^{all} local public hearings to occur within 30 days of program submittal.
- (9) Jurisdiction introduces proposed program, prepares program summary materials. [←]
- ¹¹⁰ Jurisdiction presents program to full Commission, highlighting issues of the jurisdiction's choice.

Letter
Process
Complete

- (11) Staff member uses "checklist" to document program content and highlight "deficiencies".
- (12) Staff member presents "review findings" to panel ~~Commission~~ *cross fertilization w/ staff*
~~holds local public hearing on local program.~~
- (13) ~~Commission~~ *panel* holds local public hearing on local program.
- (14) Panel meets to discuss testimony of public hearing and staff "review findings".

Question:

~~Jurisdiction representatives involved in these discussions?~~

- (15) Staff/panel prepares recommendations to full Commission.
- (16) Panel presents recommendations to full Commission.
- (17) Full Commission debates and decides on response to local jurisdiction indicating approval or deficiencies.

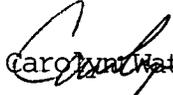
Question:

~~Jurisdiction representatives involved in these discussions?~~

- (18) Commission responds to local jurisdiction's program submittal within 90-days.

STATE OF MARYLAND
CRITICAL AREA COMMISSION
DEPARTMENT OF NATURAL RESOURCES
TAWES STATE OFFICE BUILDING
ANNAPOLIS, 21401
(301) 269-2418

TO: Sarah Taylor

FROM:  Carolyn Watson

SUBJECT: Bay Access Report - Scope of Work Effort

DATE: April 15, 1986

Attached is my revised work plan and accompanying time frame for the Bay Access Report.

CW/vn

Attachment

cc: Judge Liss
Charlie Davis
Dawnn McCleary
Kevin Sullivan
Marcus Pollock
Lee Epstein

BAY ACCESS REPORT

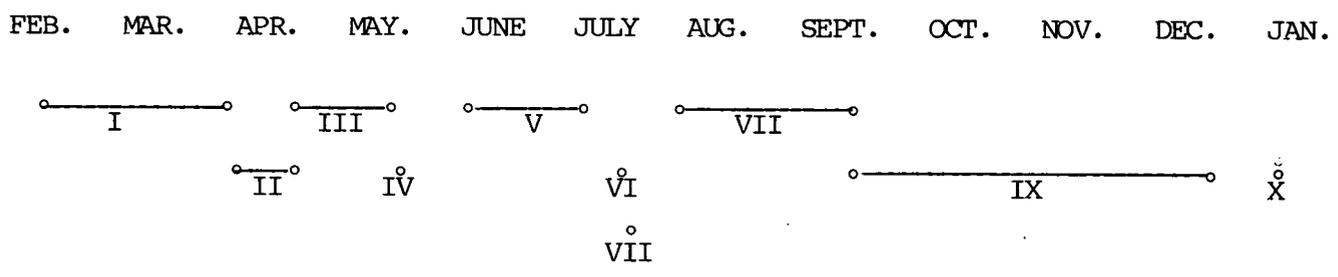
SCOPE OF WORK

- I. Establish a Work Group - Meet with representatives from various State agencies to evaluate the present roles and responsibilities of each in the provision of shoreline access to the Bay. These include the following:
 - A. Department of State Planning
 - B. Chesapeake Bay Critical Area Commission
 - C. Tidewater Administration
 1. Coastal Resources Division
 2. Waterway Improvement Division
 - D. Capital Programs
 1. Land Management and Recreational Services
 2. Program Open Space
 3. Land Planning Services
 4. Shore Erosion Control
 - E. Forest, Park and Wildlife Service
 - F. MD Environmental Trust
 - G. Department of Community and Economic Development
 1. Office of Tourist Development
- II. Prepare a brief summary report on existing conditions based on the information obtained from representatives of the above agencies. Have the representatives and Critical Area staff review and comment on the report before finalizing.
- III. Construct a survey questionnaire that addresses pertinent issues of public access such as:
 - Present range of opportunities
 - Real versus perceived needs
 - Unmet needs
 - Reasons for unmet needs
 - Efficiency of present policies
 - Changes in policies
 - New policies
 - Issues in creating increased access
- IV. Distribute summary report on existing conditions and questionnaire to the State representatives listed above as well as to local planners, watershed associations, citizen groups, and the CRAC Public Access Task Force.

*- can't do for both areas
- do 2 separate ones.
- Solomon Liss wants to be involved*

- V. Evaluate the questionnaire responses to structure a workshop.
- VI. Conduct a workshop with the individuals surveyed and any other interested parties to formulate State policies for the provision of access.
- VII. Establish a report format.
- VIII. Write a rough draft of the report and circulate to work groups and selected surveyed participants for review and comment.
- IX. Finalize the report.
- X. Submit report to the Governor and the General Assembly.

TIME FRAME



- preservation of forested land as well.

A GUIDE TO THE CHESAPEAKE BAY
CRITICAL AREA CRITERIA

Prepared by the
Critical Area Commission Staff

Draft 2
April 1986

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A GUIDE TO THE CHESAPEAKE BAY
CRITICAL AREA CRITERIA

INTRODUCTION

The Chesapeake Bay Critical Area Protection Program (Natural Resources Article §§ 8-1801-8-1816) was passed by the General Assembly in 1984 because of concern about the decline of certain natural resources of the Chesapeake Bay. Recent studies by the U. S. Environmental Protection Agency and others have shown that this decline is related to the intensity of human activities within the watershed of the Bay. In order to begin to address these sources of impact, the General Assembly designated a geographical area around the tidal waters of the Chesapeake Bay and its tributaries as the "Critical Area". It directed that new development in this area be such as to minimize impacts on the Bay's water quality and plant, fish and wildlife habitat. Pursuant to the requirements of the Act, the Chesapeake Bay Critical Area Commission was established to develop criteria for guiding local jurisdictions in developing programs for the Critical Area.

The purpose of this report is to serve as a guide to these criteria for local jurisdictions, State agencies, and other interested organizations or individuals. It is organized according to the chapters of the regulations and discusses the background and rationale for each; the requirements of the criteria; exceptions to such requirements; and suggestions for developing and implementing local programs. The Handbook includes changes made to the 1984 Critical Area Law by the Maryland General Assembly during its 1986 Legislative Session, which have the effect of altering certain of the criteria promulgated by the Critical Area Commission.

A summary of the actions required by local jurisdictions to develop their Critical Area Programs is shown in Appendix A. Sources of information which might be helpful in developing local programs are listed in Appendix B.

CHAPTER 2
DEVELOPMENT IN THE
CRITICAL AREA

INTRODUCTION

The Critical Area law states that there is a critical and substantial State interest in fostering more sensitive development activity along the Chesapeake Bay shoreline so as to minimize damage to water quality and natural habitats. The Commission was directed to establish land-use policies for development in the Critical Area which would accommodate growth and address the fact that even if pollution from development is controlled, the number, movement and activities of persons in the Critical Area can create adverse environmental impacts. In this Chapter are criteria which will accommodate the growth of human-built environments, but also provide for the conservation of fish, wildlife and plant habitats and minimize adverse impacts on water quality. These criteria describe:

1. A regional land management strategy based on classifying all Critical Area lands into one of three categories of land use intensity (i.e., Intensely Developed, Limited Development and Resource Conservation Areas) and design criteria and program objectives tailored to each of these areas;
2. Limits on the extent to which intense land disturbances can expand; and
3. The types of development activities that are to be grandfathered.

DESIGNATING AREAS

The criteria require that local jurisdictions identify which of their lands in the Critical Area are Intensely Developed Areas, Limited Development Areas, or Resource Conservation Areas. The mapping of such areas is a required element of all local Critical Area Program submissions. Initial designations are to be based on land uses existing on December 1, 1985, according to the following criteria:

Intensely Developed Area (IDA)

IDA's include any area of 20 or more contiguous acres, or the entire upland portion of a municipality within the Critical Area (whichever is less) where residential, commercial, institutional and/or industrial development is predominant and relatively little natural habitat occurs. In addition, the area is to have one of the following characteristics:

1. Housing density is equal to or greater than four dwelling units per acre;
2. Industrial, institutional or commercial uses are concentrated in the area; or
3. Public sewer and water collection and distribution systems are currently serving the area and housing density is greater than three dwelling units per acre.

Limited Development Area (LDA)

LDA's include any area currently developed in low or moderate intensity uses that contain areas of natural plant and wildlife habitat and where the quality of run-off from such areas has not been substantially altered or degraded. In addition, the area is to have at least one of the following characteristics:

1. Housing density between one unit per five acres up to four dwelling units per acre;
2. Area not dominated by agriculture, wetland, forest, barren land, surface water or open space;
3. Areas having the characteristics of the Intensely Developed Area, but less than 20 acres in extent; or
4. Areas having public water or sewer or both.

Resource Conservation Area (RCA)

RCA's are any area predominated by wetlands, forests, and forestry activities, abandoned fields, agriculture, fishery activities, or aquaculture. In addition the area is to have at least one of the following characteristics:

1. Housing density less than one dwelling unit per five acres; or
2. The dominant land use is agriculture, wetland, forest, barren land, surface water or open space.

Other Mapping Requirements

In addition to the mapping and designation of these areas, the local jurisdiction should indicate the location of any of the Habitat Protection areas described in Chapter 9 of the criteria. Information should also be provided at the time of program submittal showing the total acreage of the three areas as of December 1, 1985, within the jurisdiction and how much exists at the date of submittal. Such figures should exclude lands in the Critical Area which are tidal wetlands or in federal ownership. These data will be used to determine the jurisdiction's future growth allocation (as described in

Regulation .06) and to assess how the grandfathering allowed, pursuant to Regulation .07, has affected that growth allocation.

The criteria do not specify the detail or scale at which the mapping should be made or, with the exception of the Intensely Developed Area, the minimum size of each area. These decisions are left to the local jurisdictions.

CRITERIA REQUIREMENTS

The criteria contain limitations and conditions for the kinds of new growth or redevelopment that may occur in the Critical Area generally, and in each of the three development areas. These are summarized below. Program implementation strategies and examples of various approaches that local jurisdictions might use are outlined in the Program Implementation section which follows.

Critical Area (General) - Certain new development activities, or the expansion of existing ones, are allowed in the Critical Area only if no environmentally acceptable alternative exists outside the Critical Area and such facilities are needed to correct an existing water quality or wastewater management problem. These are:

1. Solid or hazardous waste collection or disposal facilities, and
2. Sanitary landfills.

Intensely Developed Area - New intense development in the Critical Area should be directed in or near Intensely Developed Areas. The criteria generally allow for such development (or redevelopment) provided that water quality is improved over that of pre-existing development levels, any Habitat Protection Areas are conserved to the extent possible, and expansion of such areas into the Resource Conservation Area is minimized. The criteria also require that local jurisdictions establish a strategy for reducing any adverse impacts on water quality resulting from existing development.

For new development (or redevelopment) the criteria require stormwater management; minimizing the destruction of forests and developed woodlands, particularly those identified as Habitat Protection Areas; and use of cluster development to the extent practical. The criteria promote increased public access to the water, provide for the location of ports and industries which use water for transportation, and encourage programs to be established for enhancing biological resources.

Limited Development Area - New low or moderate intensity development is permitted in the Limited Development Area if such development does not increase the overall intensity of

development beyond the level already established and does not change the prevailing character of the area as identified by the current density and land use. Thus, continuing development and infill is permitted at the low and moderate intensities that already characterize those areas.

In providing for new low or moderate intensity development, the criteria require that means be developed to protect water quality and stream habitat; minimize the cutting or clearing of trees in forests and developed woodlands and maintain or expand the total acreage of forest cover in the jurisdiction's Limited Development Area; limit the amount of impervious surfaces created on a site; protect the Habitat Protection Areas described in Chapter 9; limit development on steep slopes and soils having development constraints; and observe other existing State laws and regulations concerning soil erosion and stormwater management.

Resource Conservation Area - Some new growth is permitted in this area if it is residential in character and if the resulting overall density does not generally exceed one dwelling unit per 20 acres. New or expanded industrial or commercial facilities are not permitted and additional land may not be zoned for such purposes except in association with the provisions for expansion of development described in Regulation .06 and discussed below. New development in the Resource Conservation Area must be consistent with all of the criteria described for development in Limited Development Areas.

In addition to these limitations on new development, the criteria require agricultural and forestry protection programs, and programs to assure that the overall acreage of forest and woodlands does not decrease.

Expansion of Development - The criteria provide that Intensely Developed and Limited Development Areas may be expanded in the future. The total area of expansion may not exceed an area equal to 5% of the portion of the County's Resource Conservation Area lands that are not tidal wetlands or federally owned. No more than one-half of this allocated expansion may occur directly in the Resource Conservation Area. An example of this allocation for a hypothetical county would be as follows:

	<u>ACRES</u>
County A: Total Critical Area	50,000
Intensely Developed Areas	5,000
Limited Development Areas	15,000
Resource Conservation Areas	30,000

Expansion Formula:

Total Resource Conservation Area	30,000
Lands in Tidal Wetlands and federally owned	-10,000
Net Resource Conservation Area	<u>20,000</u>
5% Growth Expansion	x.05
Total Growth Allowed:	<u>1,000</u>
Allowed in RCA	500
Allowed in LDA	500

In addition to the size (acreage) of expansion, the criteria also provide for the location of any expanded development. These are summarized as follows:

<u>Category</u>	<u>Location Criteria</u>
New IDA's	<ul style="list-style-type: none"> * In existing LDA'S or adjacent to existing IDA'S. * Minimize impacts to Habitat Protection Areas and RCA'S. * Should be at least 300 feet from tidal waters or tidal wetlands if located in the RCA. (Note: this is merely directory, not mandatory).
New LDA's	<ul style="list-style-type: none"> * Adjacent to existing LDA's or IDA's. * Minimize impacts to Habitat Protection Areas. * Should be at least 300 feet from tidal waters or tidal wetlands if located in the RCA. (Note: same as above).

Finally, criteria require that in planning for the future expansion of IDA's and LDA's, the counties are to establish a process for accommodating the growth needs of municipalities within their jurisdictions.

The Maryland General Assembly made certain changes to the criteria requirements for new development discussed above. The changes apply only to the following jurisdictions: Calvert, Caroline, Cecil, Charles, Dorchester, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Wicomico, and Worcester Counties. In

these counties, if it is demonstrated that the one-half of the 5% growth allocation cannot be located in or adjacent to LDA's, or adjacent to IDA's, as provided for in the criteria, then that growth may occur in the jurisdiction's RCA. In order for this to occur, two conditions need to be satisfied:

- 1) The jurisdiction must demonstrate to the Commission in its Critical Area Program that new IDA's or LDA's cannot meet the location criteria listed previously (e.g., that they can only be located in RCA's and at locations not adjacent to existing IDA's or LDA's). Factors which might be involved in such a demonstration could include development constraints caused by soil or topographic conditions, a lack of sewer capacity adjacent to existing developed areas, a lack of existing developed areas, or inconsistencies with the local general development plan.
- 2) The developer of lands in the RCA which represent expansion of development must cluster such development.

PROGRAM IMPLEMENTATION

The Commission recognizes that a number of approaches are possible to implement the requirements of this Chapter. Moreover, considerable variation exists among local jurisdictions in the scope and extent of their current enabling regulations or ordinances. Accordingly, the following discussion provides general guidance for local program development and attempts to highlight approaches to implementing the minimum requirements contained in the criteria. The Commission expects that local programs are not likely to be oriented or organized in exactly this manner.

General - There are three overall requirements for local Critical Area programs in Chapter 2; 1) mapping the three development areas, 2) providing that new intense development should be directed outside the Critical Area, and 3) ensuring that new or expanded solid or hazardous waste collection or disposal facilities or sanitary landfills are not permitted unless no environmentally acceptable alternative exists outside of the Critical Area or that such facilities are needed to correct an existing water quality or wastewater management problem.

The mapping requirements of the criteria were described previously. Because designation of the three areas provides the basis for the entire Critical Area Program, this should be done at the earliest stage of program development. The actual mapping must be submitted for approval to the Commission, along with the rationale and/or criteria used to make such designations.

*In regard to new intense development, the Commission expects local jurisdictions to develop criteria for defining such development and to show that these activities are generally

directed outside of the Critical Area. This does not mean that all new intense development is prohibited in the Critical Area because the criteria provide that some of those activities may be located in an Intensely Developed Area. However, the intent of this policy is to generally encourage the siting of new activities and developments of an intense nature away from the Critical Area. Evidence of such policies would be the local jurisdiction's general development plan, zoning regulations, water and sewer plans, or growth management programs that focus new intense development outside of the Critical Area.

*For solid or hazardous waste collection or disposal facilities or sanitary landfills, local jurisdictions should adopt by regulation, or other appropriate means, the limitation contained in the criteria.

Intensely Developed Area - As previously indicated, although new intense development and redevelopment is permitted in this area, the criteria require that special attention be given to improving the water quality of run-off from existing and proposed development. The criteria contain no limitations on the kinds of new development which may occur in such areas, aside from those excluded from the Critical Area altogether. It should be noted however, that non-maritime heavy industry, transportation facilities, and utility lines [except those provided for in Regulation .02.F.(2)], and permanent sludge handling, storage and disposal facilities, other than those associated with wastewater treatment facilities, may only be located in Intensely Developed Areas.

In developing their programs, local jurisdictions should address the criteria requirements for existing development, new development or redevelopment, and enhancement programs. These are summarized as follows:

1. Existing Development:

- * Encourage use of retrofitting measures to address any existing stormwater problem (this generally applies to areas developed prior to the adoption of existing stormwater management regulations). Measures might include installation of new stormwater infiltration areas, frequent vacuuming of street and parking lots and other approaches identified in the National Urban Run-off Program. (See the section on Sources of Information at the end of this Guide for additional references on this subject.) In their program submission, local jurisdictions should show evidence that they have examined their Intensely Developed Areas to determine if such problems exist and indicate the corrective measures proposed for such problems.

* Assess the extent to which existing development is causing adverse water quality impacts and develop strategies for reducing these impacts. Existing data and information from State and federal agencies, or private groups, may be used to make this assessment. Local programs should include the same type of information as indicated above for stormwater management problems. The criteria suggest several corrective measures including urban forestry programs and public education.

2. New Development or Redevelopment:

*Require technologies to be utilized as required by existing State and local ordinances to minimize adverse water quality impacts caused by stormwater run-off. Specifically, such technologies must reduce pollutant loadings by at least 10% below that of pre-development levels. In their program submission, the local jurisdiction should demonstrate that a process has been developed to determine the water quality conditions at a site prior to development or redevelopment.

*If these technologies do not achieve the minimum 10% pollutant loading reduction, the jurisdiction shall require offsets either on or off the site. The offsets, when considered in addition to the technologies used above, should achieve at least the 10% pollutant reduction required, but the reductions must occur in the same drainage area as the site. Local jurisdictions should specify the means to be used by a developer to determine the water quality benefits of offset measures. They may include modelling, monitoring or other appropriate techniques.

*Require that future development shall use, to the extent practicable, cluster development practices to reduce impervious surfaces and maximize areas of natural vegetation.

*Provide that where the cutting or clearing of trees associated with current or planned development occurs on one acre or more that the local jurisdiction has regulations, ordinances or other means to: 1) minimize such cutting or clearing; and 2) enhance the forest or developed woodland resources of site of the development (i.e., street tree planting, increased landscaping requirements and other urban forestry practices). The protection of any Habitat Protection Area which might be disturbed by the current or planned development is also required.

*Provide that new ports, and industries which use water for transportation and derive economic benefits from shore access, are to be located near existing port facilities and at sites for which an exemption from the Buffer requirements has been granted by the Commission. Other sites planned for future port facilities may be identified if it can be shown that such use will provide significant economic benefit to the State or local jurisdiction and, further, that the sites proposed would qualify for the Buffer exemption. A request for the Buffer exemption should accompany the designation or identification of any such sites proposed in local programs.

3. Enhancement Programs

*Provide by regulation or other appropriate means that, where practicable, permeable areas shall be established in vegetation.

*Maintain existing areas of public shoreline access; encourage new ones to be established. Programs to accomplish this purpose should be developed and could include public access requirements for redevelopment or new development projects proposed at the shoreline. Bicycle and foot paths, boat ramps, and small waterfront parks are other examples of access improvements that may be provided by public authorities or private developers.

*Establish programs to enhance biological resources. These programs, to be developed with the assistance of the Maryland Forest, Park and Wildlife Service, the Tidewater Administration, the Department of Health and Mental Hygiene and other appropriate State agencies, should propose general policies for enhancing the natural qualities of a site when it is proposed for new development or redevelopment. Programs may also include the targeting of specific sites for restoration (i.e., degraded wetlands) or community-based programs such as tree planting or landscaping. The jurisdiction's proposed enhancement measures should be described in their program submission.

Limited Development Area - In this area, new development is permitted if the prevailing character and density of land use in the area is maintained, if the total acreage in forest cover is maintained or increased, and if water quality and habitats are not adversely affected. Generally, the criteria require that when new development is planned or proposed, that certain environmental or natural features in the project area be identified and measures taken to protect or conserve them. The following discusses each of these features and indicates the responsibilities of the proposer of development and the local jurisdiction in protecting these resources.

1. Habitat Protection Areas (as defined in Chapter 9 of the criteria)

* A developer is required to determine whether any such areas exist on the project site or, if off-site, whether they could be adversely affected by the proposed project. Where such areas are present, the following standards are to be applied:

- a) Roads, bridges and utilities may not be located in these areas unless no feasible alternative exists, except that such construction is not permitted at all in the Buffer (described in COMAR 14.15.09.01). Where these activities must cross such areas, they must be designed, constructed and maintained to protect the habitats, to provide maximum erosion protection, and to maintain hydrologic processes and water quality.
- b) The developer shall protect any wildlife corridors which may be present (as described in Chapter 9, Regulation 04.)
- c) The developer must protect any Habitat Protection Area located in forests and developed woodlands.

2. Streams (Tributary Streams as defined in Chapter 1) - Generally, development activities that cross or affect streams would not be expected to cause adverse impacts on streams because they would not be permitted in the Buffer (e.g., within at least 100 feet of streams). However, where they are permitted, such as water-dependent facilities or development in areas exempted from the Buffer requirements, or where the scale or intensity of the project is large, the developer is required to do the following:

*If the project involves development activities which would cross or effect streams, the developer is required to identify any such stream in the project area, including those off-site, which might be affected by the project.

*The developer is required to show that the development will:

- a) not cause increases in the frequency and severity of floods;
- b) retain existing tree canopy
- c) provide for the retention of the natural substrate for streambeds

d) minimize adverse impacts to water quality and storm water runoff.

3. Wildlife Corridors - The criteria require that all development sites incorporate a wildlife corridor system that connects the largest undeveloped part of the site, or the most vegetated part, with similar tracts of land adjacent to the site. The system may consist of the corridors mentioned above which have been identified in Chapter 9. Two actions are required to implement this criterion:

* The developer should be required to provide for the retention of wildlife corridors in designing a project;

* The local jurisdiction shall ensure the maintenance of such corridors by appropriate means (i.e., requiring the establishment of conservation easements, restricted covenants recorded homeowner association maintenance agreements, and the like)

4. Forests and Developed Woodlands (As defined in Chapter 1 of the Criteria)

The intent of these criteria is to maintain, or preferably increase, the total acreage in forested coverage in the local jurisdiction's Limited Development Area. On any given site proposed for development, the criteria limit the amount of forest and developed woodland that may be removed and provide guidelines for replacement and, where appropriate, for afforestation on sites where no forest exists. Following is a summary of these requirements:

*If no forest exists on the site, the developer shall establish a forest or developed woodland on at least 15% of the site at a location to be approved by the local jurisdiction, and this afforested area is to be maintained in a forested condition through appropriate protective instruments (e.g., easements, restrictive covenants or other recorded owner agreements);

*If a forest or developed woodland exists on the site and the development proposed will involve the cutting or clearing of such trees, the developer is required to:

- a) Designate the forest or developed woodland on the proposed site plan;
- b) Obtain a grading permit before cutting or clearing occurs; and

- c) Seek comments on the project from the Maryland Forest, Park and Wildlife Service and consider the recommendations made by the Service. Such comments would address road layout, retention or removal of particular trees or stands of trees, future management practices and the like.

*Cutting or clearing may then be allowed to occur providing that:

- a) All forests cleared or developed are to be replaced on not less than an equal area basis at a location within the local jurisdiction's Critical Area.
- b) No more than 20% of the forest or developed woodland within the site proposed for development may be removed (except as provided for in (c) below) and the remaining 80% is to be maintained as forest cover through the use of appropriate instruments (e.g., recorded restrictive covenants);
- c) A developer may propose clearing up to 30% of the forest or developed woodland on a site, but the trees removed in excess of 20% must be replaced at the rate of 1.5 times the amount removed.

(For example, on a 100 acre wooded site, if the developer proposes clearing 25 acres, it would be required that replacement be made of 27.5 acres. The additional 2.5 acres would be afforested offsite at a location determined by the local jurisdiction);
- d) If more than 30% of the forest on a site is cleared, the forest is required to be replanted at 3 times the total areal extent of the cleared forest;
- e) If the cutting of forests occurs before a grading permit is obtained, the forest is required to be replanted according to the requirement in (d) above.

The above requirements for conserving forests and developed woodlands should be implemented by regulation by the local jurisdiction. In addition, local jurisdictions are required to adopt certain other programs. These are:

*Provisions for surety to be provided by owners or developers in an amount suitable to assure that replacement of forests and developed woodlands occurs when more than 20% of such areas are removed from a site.

*Alternative provisions or guidelines for implementing the replanting requirements described above where the areal extent of a site prevents such replanting on that site. Such provisions can include fees-in-lieu requirements adequate to ensure, and dedicated specifically to, the restoration or establishment of an equivalent forest area. The local jurisdiction should also determine those areas within their Critical Area where reforestation would be practical and effective in achieving the goal of maintaining or increasing the forest coverage of the Critical Area. The Maryland Forest, Park and Wildlife Service can assist local jurisdictions in developing such a program.

5. Steep Slopes

*Development is not permitted on steep slopes (those greater than 15% percent) unless it can be shown that such development is the only effective way to maintain or improve the stability of the slope, and is consistent with the density, water quality and habitat protection policies for Limited Development Areas (See Regulation .04.B. of the criteria).

6. Soils With Development Constraints

*Development on such soils should be discouraged, but may be allowed if adequate mitigation measures are implemented to address the identified constraints and if the development will not adversely affect water quality or plant, fish and wildlife habitat.

7. Other Requirements

In addition to the identification and protection of the features discussed above, local programs are to include the following requirements or measures in regulating new development in their Limited Development Areas.

*Man-made impervious surfaces may not exceed 15% of the site proposed for development. In addition, on lots of less than one acre which are in a subdivision approved after June 1, 1986, impervious surfaces may be allowed on up to 25% of the lot, provided that impervious surfaces on the whole parcel that is subdivided do not exceed 15%.

*Local jurisdictions should consider allowing for modification to (e.g., reduction of) existing road standards so that the extent and effect of new development is minimized. Such modifications could include reduced road widths or providing for permeable surfaces, but the reduced standards must not significantly affect safety.

*Local jurisdictions should consider requiring clustering of future development;

*Local jurisdictions are required to refer to the existing State laws and regulations listed in the criteria governing sediment control and stormwater management.

Resource Conservation Area

By definition, the Resource Conservation Area (RCA) is dominated by farmland, forests, wetlands, and barren land and supports resource utilization and recreation activities. The intent of the criteria is to protect these lands and activities for the water quality and habitat protection benefits they provide within the Critical Area. The criteria address two general issues: 1) limitations on the nature and intensity of new development activities which can occur in these areas, and 2) programs to conserve or enhance land-uses and activities appropriate for RCA's. These are summarized as follows:

1. Development - The criteria provide that all existing industrial and commercial facilities, including those supporting resource utilization activities (agriculture, forestry, aquaculture or fisheries) may continue to exist in an RCA. The Commission assumed that relatively few industrial or commercial facilities not associated with the resource utilization activities, will be located in a jurisdiction's RCA. Existing residential uses may also continue. Future development is limited as follows:

- * New industrial or commercial facilities are not permitted and additional land may not be zoned for these purposes unless that land is designated for intense or limited development as part of the jurisdiction's future growth allocation. (See Section below on Expansion of Development).
- * New residential development is permitted if the density of such development generally does not exceed one dwelling unit per 20 acres. Within this limit, the local jurisdiction may determine minimum lot sizes.

There are two circumstances where the one dwelling unit per 20 acres density may be exceeded:

- a) A local jurisdiction may, if it wishes, permit the area of private wetlands located on a property to be used in determining the density of development on that property provided that:
 - (1) the density of development on the upland portion of the property does not exceed 1 dwelling unit per 8 acres; and
 - (2) State Wetlands Maps must be used to determine the extent of the private wetlands.

b) A local jurisdiction may, if it wishes, develop and implement a program providing for the subdivision of parcels of land to be conveyed to family members in which the resulting density of development would exceed 1 dwelling unit per 20 acres. This provision is discussed further on page 24.

- * Local jurisdictions are encouraged to consider and use various means to maintain the land area in protective land uses. In combination with zoning, these could include transfer of development rights, clustering, the use of density bonuses outside the RCA's, or other measures.
- * New development activity in the RCA shall conform to the same standards as those set forth in the criteria for Limited Development Areas as previously described. Local jurisdictions should provide for this requirement by regulation or other appropriate means.

2. Conservation or Enhancement Programs - Local jurisdictions are required or encouraged to develop the following measures or programs to assist in achieving the criteria's goals for Resource Conservation Areas;

- * Require that land management practices are consistent with the requirements for agriculture, forestry and habitat protection as described in Chapters 5, 6, and 9 of the criteria.
- * Promote the use of agricultural and conservation easements. This could be implemented in a number of ways including participation in the Maryland Agricultural Land Preservation Program or seeking the assistance of the Maryland Environmental Trust in developing a conservation easement program.
- * Develop incentive or disincentive programs, as appropriate, to promote the continuation of agriculture and forestry and to protect natural habitats. Incentive measures could be developed in conjunction with the easement programs mentioned above. Disincentive measures might include differential taxation which favor agricultural and forest lands.

- * Develop programs to ensure that the overall acreage of forests and woodland does not decrease. Such programs could be implemented in conjunction with the replanting requirements described for the Limited Development Area; areas in the RCA could be designated for any off-site planting required by the LDA criteria.

EXPANSION OF DEVELOPMENT

The criteria dealing with the extent and location of any expanded development in the Critical Area were described previously. Local jurisdictions are not required to designate such areas in the development of their programs if they do not wish to propose for expansion of development at that time. However, before any such areas can be developed, they must be mapped and submitted to the Commission for approval. This submission should include an analysis of the manner in which the areas designated conform to the locational criteria previously described and the extent to which the proposed expansion was developed in coordination with the municipalities and accommodates their growth needs. The submission should also indicate how such an expansion affects the total growth allocation in the jurisdiction's Critical Area.

INTRAFAMILY TRANSFERS

The Maryland General Assembly made certain changes to the Critical Area Law in 1986, to permit the subdivision of certain lands in the Resource Conservation Area into parcels to be conveyed to family members. These changes specify the requirements and provisions for a local intrafamily transfer program and the specific number of such transfers which are permissible. These are discussed below.

Local Programs - If a local jurisdiction wishes to include provisions for intrafamily transfers in the Critical Area, such provisions must be submitted to and approved by the Commission and must include:

- 1) Conditions of approval for such transfers which require that:
 - a) a covenant run with the deed which states that the subdivision was for the purpose of creating a bona fide intrafamily transfer;
 - b) once a transfer is made to a family member, a subsequent transfer cannot be made unless to a member of the owner's immediate family; and

- c) conveyance of the lot to a third party as security for a mortgage or deed of trust is not to be prevented under the program.
- 2) Standards and procedures by which the jurisdiction will permit the subsequent conveyance of lots to persons other than immediate family members. The standards and procedures must assure that:
- a) the lot was created as part of a bona fide transfer and not with the intent of subdividing for commercial sale; and
 - b) a change in circumstances has occurred since the original transfer which warrants an exception. Such a change could occur because it is not inconsistent with the intent of the intrafamily program, or that other circumstances are present and the action would not be inconsistent with the criteria that support the protective land uses and the natural habitats of the Resource Conservation Area.

Specific Conditions - The local jurisdiction's intrafamily transfer program can only be made from parcels of land that were on record as of March 1, 1986, and which are 7 acres or more and less than 60 acres in size. On such lands the following intrafamily transfer conditions shall be applied:

- a) A parcel that is 7 acres or more and less than 12 acres in size may be subdivided into 2 lots;
- b) A parcel that is 12 acres or more and less than 60 acres in size may be subdivided into 3 lots;
- c) The lots may be created at any time;
- d) No greater subdivision of such parcels may be allowed; and
- e) That the subdivisions, made as part of a bona fide transfer, be subject to local approval under Article 66B or Article 28 of the Code, or under any subdivision control provisions of a charter county.

GRANDFATHERING

The Critical Area Law includes as a required element, that local programs would have to contain provisions relating to the grandfathering of development at the time the program is adopted or approved by the Commission. Generally, grandfathering refers to provisions which allow certain pre-existing uses to continue even though they may be inconsistent with a new law. The criteria in this section provide for the conditions under which development in the Critical Area is to be grandfathered by local jurisdictions. These requirements are summarized as follows:

- * An individual wishing to build a single house on his lot may do so.
- * Individual parcels of land not part of a subdivision are grandfathered.
- * Subdivision of land approved prior to June 1, 1984, is grandfathered. Building on the land, however, must comply insofar as possible with the criteria if it is done after December 1, 1985, and prior to Program approval. Otherwise, it will count against the growth allocation if it is in the Resource Conservation Area. If building occurs after the local program is approved, it must comply with the procedures described in the local program.
- * Subdivision of land is grandfathered if it is approved between June 1, 1984, and the date of local program approval. However, it must comply with the "interim findings" requirements of the Critical Area law (§8-1813) and subdivision of land approved after December 1, 1985, must conform to the criteria or count against the growth increment.
- * Any land on which development activity has progressed to the point of pouring of foundation footings or the installation of structural members is grandfathered.
- * Existing land uses may continue, but expansion may require a variance.

In their Critical Area Programs, local jurisdictions are required to establish the grandfather provisions contained in this section. It is also required that local jurisdictions will have determined, as of December 1, 1985, which of their lands in the Critical Area fall into the three development areas previously described in this Chapter (e.g., IDA, LDA, and RCA). From that date to program submittal, a tally or accounting should be maintained of grandfathered and developing parcels so that a determination can be made of the effects of such development on the jurisdiction's growth allocation. Absent such an accounting, it is possible that a local jurisdiction may lose any growth allocation it could get at the time of program approval.

GRANDFATHERING--Summary of Criteria as promulgated by the Chesapeake Bay Critical Area Commission
in the Maryland Register, November 22, 1985

		June 1, 1984	December 1, 1985	date of program approval	
Grandfathered situations and Conditions	Regulatory conditions specified by the Act	prior to "interim findings"	interim findings apply		subject to conditions of local program
		prior to criteria finalized	proposed criteria finalized		
		Individual parcels in existence before December 1, 1985 are grandfathered, subject to the following conditions:	→	If building permits are issued during this interval the development will count against the growth allocation if it is in a RCA unless steps had been taken to conform the development to the criteria insofar as possible.	If building permits are approved after program approval, they must comply "insofar as possible" with the criteria according to procedures developed by the local jurisdiction.
		Subdivisions approved before June 1, 1984 are grandfathered subject to the following conditions:	→	No additional conditions apply if building permits are issued during this interval	If building permits are approved after program approval, they must comply "insofar as possible" with the criteria according to procedures developed by the local jurisdiction.
			Subdivisions approved during this interval are grandfathered subject to the interim findings. →	no additional conditions apply	no additional conditions apply
			Subdivisions approved during this interval must either conform to the criteria or count against the growth allocation. →	no additional conditions apply	
			Any land on which development activity has progressed to the point of pouring of foundation footings or the installation of structural members is grandfathered.	no additional conditions apply	

CHAPTER 3 WATER-DEPENDENT FACILITIES

INTRODUCTION

Certain land uses can only occur at or near the shoreline because of their intrinsic dependence on water or their need for access to water. The nature of such uses (i.e., port facilities, marinas) can bring about disturbances and negative impacts to wildlife and aquatic resources. These criteria describe the design and locational standards under which certain water-dependent activities may be permitted within the Critical Area.

This Chapter contains the requirement that local plans describe a process for identifying areas that are suitable for water-dependent facilities. It also contains requirements for 1) new, expanded or redeveloped industrial or port-related facilities; 2) marinas and other commercial maritime facilities; 3) community piers and other related non-commercial boat docking and storage facilities; 4) public beaches and other public water-oriented recreation or education areas; 5) research areas; and 6) fisheries facilities. In addition to establishing environmental siting and design standards, the criteria direct the distribution of new water-dependent uses based on existing patterns of land use. It is the intent of the criteria to prevent development activities from occurring on the shoreline unless they depend on such a location by their nature, and to regulate water-dependent development so that adverse impacts on water quality and habitats are minimized.

CRITERIA REQUIREMENTS

The criteria for water-dependent facilities contain two general kinds of requirements for local jurisdictions: 1) developing a plan for approving areas suitable for water-dependent facilities, and 2) adopting regulations which limit new development occurring in the Buffer to that which is water-dependent and which minimizes adverse environmental impacts. Also required are regulations which restrict the siting of certain new water-dependent facilities on the shoreline. These requirements are discussed in the following section.

Plans for Water-Dependent Facilities - Under the requirements of Section .04, local jurisdictions are required to develop a plan, related policies and implementation programs whereby shoreline areas would be identified as to their suitability for new or expanded water-dependent facilities. While it may do so, the plan need not necessarily result in a prior determination of sites suitable for such facilities. Instead, it must describe a process whereby the various factors shown in Section .04B are considered in planning for water dependent facilities. (This will be discussed further under

Program Implementation). This process must involve re-evaluation of existing zoning to determine if the current or projected future use of areas presently designated for these facilities is consistent with the policies of this Chapter.

Specific Requirements - Generally, the criteria provide that only those development activities which are water-dependent are to be allowed within the Buffer described in Chapter 9. In addition to the water-dependency requirement, new or expanded development activities are permitted in the Buffer if they:

- a) meet a recognized private right or public need;
- b) minimize adverse impacts on water quality and fish, plant and wildlife habitat;
- c) locate non-water-dependent aspects of the project (i.e., parking lots) outside the Buffer to the extent possible; and
- d) conform to the local plan for water-dependent facilities mentioned above.

In addition to this overall requirement, the criteria specify where various classes of water-dependent facilities may be sited according to the development areas described in Chapter 2 (e.g., Intensely Developed, Limited Development and Resource Conservation Areas), but providing such facilities meet the requirements of items a-d above. These are summarized in Table 1.

TABLE I
 LOCATIONAL REQUIREMENTS FOR
 WATER-DEPENDENT FACILITIES

<u>WATER-DEPENDENT FACILITY</u>	<u>BUFFER AREA* PERMITTED</u>	<u>COMMENT</u>
Industrial and Port Related Facilities (New, Expanded, Redeveloped)	IDA areas exempted	May be permitted only in shoreline from the Buffer requirement
Marinas and other Commercial Maritime Facilities (<u>New</u>)	IDA LDA	-
Marinas and other Commercial Maritime Facilities (<u>Expanded</u>)	IDA LDA RCA	Permitted in RCA only if net improvement in water quality is achieved
Community Piers (New and Expanded)	IDA LDA RCA	Subject to limitations on slip density
Public Beaches and Other Public Water- Oriented Recreation Areas (New)	IDA LDA RCA conditions	Allowed in LDA and RCA under certain
Research Areas (New)	IDA LDA RCA	Provided that non-water- dependent features are located outside of Buffer
Fisheries Facilities	IDA LDA RCA	

*Key: IDA - Intensely Developed Areas
 LDA - Limited Development Areas
 RCA - Resource Conservation Areas

PROGRAM IMPLEMENTATION

In order to implement the requirements of this Chapter, it is suggested that the following procedures be used.

Plan for Water-Dependent Facilities - As indicated previously, local jurisdictions will be expected to develop a process which considers eight factors (Section .04B) in planning for areas which would be suitable for water-dependent facilities. These factors are: 1) water circulation patterns and salinity regimes; 2) flushing characteristics; 3) wetlands, submerged aquatic plant beds and other important aquatic habitat; 4) water quality, 5) shellfish beds; 6) the effects of any dredging needed; 7) placement of dredged material spoil; and 8) the natural transport of sand.

The intent of this requirement is to enable local jurisdictions to determine where new or expanded water-dependent facilities should not be sited because adverse impacts to water quality or aquatic habitats would occur. This requirement is not necessarily intended to be a site-specific evaluation of a particular proposed project although it may be used for that purpose. Instead, it is intended to be a general assessment, in a planning context, of areas where such facilities are likely to be inappropriate. Such an assessment should rely on generally available and already existing information. (Sources of such information are listed at the end of this Guide.) Local jurisdictions are not required to conduct, or otherwise provide for, new studies necessary to collect information that is unavailable from State or federal agencies or other appropriate sources.

The nature of the local planning process for water-dependent facilities is not explicitly stated in the criteria and the Commission intended that each jurisdiction should have the flexibility to develop a process which would meet its particular conditions. However, these plans should have the following minimum elements:

- 1) A planning process should be described that will result in the identification of shoreline areas suitable for the location of those water-dependent facilities permitted to occur in the Buffer as listed in Table I.
- 2) The process must include consideration of the environmental impact factors listed in Section .04B of the criteria in identifying areas suitable for water-dependent facilities.
- 3) The process must include the re-evaluation of areas currently zoned or approved for such facilities to determine if such areas conform to the evaluation factors and the other requirements of this Chapter.

- 4) Mechanisms should be proposed for implementing the finding that certain areas are suitable or unsuitable for these facilities. Re-zoning is an example of such an implementing mechanism.

Specific Requirements - In addition to the local plan, implementation of the criteria will require certain other actions by local jurisdictions. These are listed below:

- 1) Provide by regulation or other appropriate means that only those water-dependent facilities described in Sections .06, .07, .08, .09 and .10 (e.g., marinas, community piers, public beaches, research areas and fisheries activities) shall be permitted in the Buffer described in Chapter 9.
- 2) Provide by regulation or other appropriate means that the requirements for each water-dependent facility described in Sections .06 - .10 shall be observed.
- 3) Request, at the time of local program submission, exemption from the Buffer requirements as provided for in COMAR 14.15.09.C.(8) if the exempted area will be designated for new, expanded or redeveloped industrial, or port-related water-dependent facilities.
- 4) Identify, with the assistance of appropriate state agencies, areas with high potential for aquaculture. Where such areas exist and are now used for aquaculture, the local programs shall provide programs that protect these areas from degradation by other types of land or water use or by adjacent land and water uses.

SOURCES OF ASSISTANCE

The following agencies will be able to provide the information necessary to meet the requirements of this chapter:

Water Resources Administration (WRA)

Water circulation patterns, salinity regimes and flushing characteristics - This information is generally available, but in a variety of forms and locations (e.g., The Johns Hopkins University, University of Maryland, several State agencies). The WRA will serve as a central source of these data for local jurisdictions who are developing Critical Area Programs. Tidal Wetlands - Maps are currently available within each jurisdiction. If needed, additional copies may be obtained from WRA. Updated maps are now being prepared by the WRA and are expected to be completed in late 1987.

Tidewater Administration (TID)

Shellfish beds, submerged aquatic vegetation beds - Oyster bars and SAV beds are shown on maps from TID. Clam bed locations are also available from TID, but because such beds are subject to year-to-year fluctuations, their location would need to be updated on an annual basis. Aquatic areas suitable for aquaculture - TID will make available general guidelines for the location of such areas.

Department of Agriculture (DOA) - Land areas suitable for aquaculture - The DOA will make available general guidelines for the location of such areas.

CHAPTER 4 SHORE EROSION PROTECTION

INTRODUCTION

The Commission recognized that some parts of the Chesapeake Bay shoreline are undergoing severe erosion and that bulkheads and other structural erosion control measures are, in some situations, the only practical and effective means for achieving erosion control. However, because those structures can cause disturbance to the aquatic environment, their use should be limited to those areas where they are needed and where alternative non-structural measures would not be practical or effective. Non-structural measures include vegetative stabilization, grading and alteration of near shore vegetation.

The criteria contained in this Chapter relate to the identification of the erosive characteristics of shorelines so that areas are delineated where no significant erosion is occurring and which would not need protection measures; where non-structural control measures can be utilized effectively; and areas where erosion is so severe, or local conditions of fetch, soils and slopes are such, that only structural measures would be practical and effective. Identifying such areas has three purposes: 1) maintaining the natural character of the shore and adjacent aquatic habitats; 2) discouraging unneeded shoreline alterations; and 3) alerting property owners or prospective buyers of waterfront land to the relative extent of erosion occurring and the measures generally appropriate for controlling such erosion.

DESIGNATION

The criteria in this Chapter require local jurisdictions, with the assistance of State or federal agencies, to map their shoreline areas within the Critical Area in order to designate those which have the following characteristics:

- 1) Areas where no significant erosion is occurring (e.g., the area is eroding at a rate of less than two feet per year);
 - a) Areas where no appreciable erosion is occurring and no erosion control measures are necessary or warranted;
 - b) Areas where appreciable erosion is occurring and where non-structural measures would be practical and effective;

- c) Other areas where appreciable erosion is occurring and where non-structural measures would be impractical or ineffective in controlling erosion;
- 2) Areas of significant shore erosion (e.g., the area is eroding at a rate of 2 feet or more per year);
- a) Eroding areas where only structural measures would be practical and effective;
 - b) Other eroding areas where non-structural measures would be practical and effective;

Information for accomplishing this designation and mapping is available as follows: The Maryland Geological Survey will make 1" = 2,000' scale maps available to local jurisdictions showing shoreline areas with significant historic rates of erosion (e.g., rates of 2 feet or more per year). The maps are generally based on erosion rates occurring between the 1840's and 1940's although for some areas, the information was updated in the 1970's. The maps show the degree of historic erosion (slight, low, medium and high) but for purposes of implementing the Critical Area Criteria, all areas with rates exceeding 2 feet per year can be considered the same (e.g., as significantly eroding). It should be noted that some areas shown as historically eroding have since been protected with control measures and are not presently eroding. However, such areas will still be prone to erosion if these measures are not adequately maintained.

The Geological Survey maps cannot be used directly to precisely define areas where structural or non-structural measures are practical and effective. However, the Capital Programs Administration in the Department of Natural Resources will be developing criteria to enable local jurisdictions to make these determinations on a generalized basis for mapping purposes. As the criteria indicate, the evaluation of an individual shore erosion measure would have to be accomplished on a site-specific basis and is not a requirement for local Critical Area Programs.

PROGRAM IMPLEMENTATION

Following this mapping, local jurisdictions are to establish policies for achieving erosion control appropriate to the characteristics of each shoreline area mapped above. These objectives are summarized in Table 2.

TABLE 2

Erosion Control Measures
Appropriate to Various Shoreline Conditions

<u>Erosion Condition</u>	<u>Erosion Control Recommendation</u>
1. No appreciable erosion	No measures needed.
2. No significant erosion (Rates less than 2 feet per year)	Non-structural measures preferred wherever practical and effective; structural measures generally not encouraged
3. Significant erosion (Rates 2 feet per year or greater)	Non-structural measures to be considered; if not practical and effective, structural measures may be installed provided that the measure used best provides for conservation of fish and plant habitat.

The criteria do not specify the particular policies or programs which local jurisdictions are to adopt for meeting these objectives. Appropriate measures could include, but are not limited to:

1. Revisions in subdivision regulations to address shore erosion measures proposed as part of a project;
2. Revisions to building permit requirements where the jurisdiction requires such permits for erosion measures;
3. Revisions to grading permits where such permits are required for shore protection measures;
4. Requiring permits for shore erosion measures placed in the Buffer; or
5. Dissemination of public education materials focusing on the use of structural and non-structural erosion control measures.

The particular policies adopted or proposed should be included in the local jurisdiction's Critical Area Program document.

CHAPTER 5
FOREST AND WOODLAND
PROTECTION

INTRODUCTION

The Chesapeake Bay Critical Area Act recognizes that forests are protective land uses which provide significant water quality and wildlife habitat benefits. In developing the Critical Area criteria, it was the objective of the Commission to conserve forests and woodlands to the extent possible so that these benefits could be maintained, or preferably enhanced. Accordingly, criteria were proposed to minimize the cutting or clearing of trees associated with development activities and in important habitat protection areas.

CRITERIA REQUIREMENTS

There are two general requirements in this Chapter. One is for the development of a Forest Preservation Plan; the second is that timber harvesting on one acre or more occurring within any one year interval is to be conducted under a Forest Management Plan and all harvests on 5,000 square feet or more of disturbed area must have a Sediment Control Plan. In addition to the requirements of this Chapter, the Criteria contain other references to the cutting or clearing of trees. These include limitations on the extent of forest cover that can be removed by new developments in the Limited Development Area [Chapter 2, Regulations 04.C(2), (3), (4) and (5)]; protection and enhancement of forests and woodlands in the Intensely Developed Areas [Chapter 2, Regulation .03C(7), (8) and (9)]; and the habitat protection requirements in Chapter 9. Implementation of the requirements of Chapters 2 and 9 are discussed in those chapters.

Forest Preservation Plan - Local jurisdictions are to develop a Forest Preservation Plan as part of their Critical Area Program when forests or developed woodlands occur within their jurisdiction. If such resources do not exist, the Plan is not required, although consideration of forest resources may still be required where re-development or new development occurs in Intensely Developed Areas.

The Plan requires the identification and designation (i.e., mapping) of forests and developed woodlands in the jurisdiction. Forests and developed woodlands of less than one acre are not required to be identified. Forests which include the Habitat Protection Areas described in Chapter 9 must also be identified. Finally, the Plan is required to propose incentive programs for conserving forest land and for converting other land uses to forested conditions.

Forest Management Plans - A Forest Management Plan is required for all timber harvesting in the Critical Area occurring within any one year interval on one acre or more of land. The Plan is to be prepared by a registered professional forester and reviewed by the Maryland Forest Park and Wildlife Service through the District Forestry Board and the project forester, and filed with the local jurisdiction. The Plans are to include measures to protect water quality and the Habitat Protection Areas designated in Chapter 9, including provisions for preserving the continuity of habitat both geographically and over time.

Timber harvests disturbing an area of 5,000 square feet or more are to be conducted under a Sediment Control Plan. The Plan is to be developed according to existing State guidelines entitled "Standard Erosion and Sediment Control Plan". Implementation of the Plan is to be done pursuant to specifications established by the local jurisdiction or the Maryland Forest Park and Wildlife Service. These sediment control provisions are already required under existing State statutes and are usually handled by the local Soil Conservation District Office.

It should also be noted that timber harvesting operations will need to observe the requirements of Chapter 9 when they occur in, or may effect, a Habitat Protection Area.

PROGRAM IMPLEMENTATION

In developing programs to meet the requirements of this Chapter, it is suggested that local jurisdictions use the following process.

Forest Preservation Plan - The first element of the Preservation Plan is to identify and designate forests and developed woodlands of one acre or more in the jurisdiction. The Commission recognizes that the designation of developed woodlands may be difficult in areas where residential structures are obscured by tree cover. The criteria allow for local jurisdictions to determine their own mapping rules for developed woodlands; however, the criteria used in such rules should be shown in the local program document. The Maryland Forest, Park and Wildlife Service will be able to assist local jurisdictions in these designations.

In addition, local jurisdictions must identify those forest and woodland areas which are defined in Chapter 9 as Habitat Protection Areas. This can be accomplished by overlaying the habitat areas onto the map or other designation device used to identify forests and woodlands.

Following this inventory, local jurisdictions should develop a means of communicating information to owners of forest and developed woodlands about: 1) the requirements for Sediment

Control and Forest Management Plans; 2) the limitations on cutting of trees which may be necessary in the Habitat Protection Areas; and 3) the provisions of Chapter 2 which limit the clearing of trees associated with new development in LDA's and RCA's.

The second element of the Forest Preservation Plan is the development of programs to provide incentives for conserving forest land and for the conversion of other land uses to forested conditions. Such programs could consist of 1) urban forestry programs on redeveloped lands or in existing neighborhoods; 2) tree planting on publicly- owned barren land; 3) developing community programs for tree plantings in the Buffer; and 4) implementation of the afforestation requirements discussed in Chapter 2.

Forest Management Plans - Aside from notifying landowners of the requirements for Forest Management and Sediment Control Plans, the local jurisdictions are not required to be involved in the development of such Plans, except where cutting is proposed in a Habitat Protection Area. In those instances, the protection requirements developed pursuant to implementing Chapter 9 should be adequate to protect such areas. However, local jurisdictions are required to designate a local agency with which the Forest Management Plans will be filed. This requirement will provide local jurisdictions with an opportunity to review these plans, ensure their consistency with local Critical Area Program objectives, and to serve as the basis for any subsequent enforcement action which may be necessary by the jurisdiction if the timber harvesting or other practices do not conform with the Plans.

CHAPTER 6 AGRICULTURE

INTRODUCTION

As in the case of forestland, agriculture is described in the Critical Area Act as a protective land use. The Commission's overall goal with respect to agriculture was to seek to preserve existing agricultural land in the Critical Area, but to provide for the management of these lands so that non-point source pollution resulting from agricultural activities is minimized and natural habitats are conserved. The regulations provide that within five years of the effective date of the criteria, farms in the Critical Area have in place, and be implementing, a Soil Conservation and Water Quality Plan and associated Best Management Practices.

CRITERIA REQUIREMENTS

Generally, the criteria impose three requirements with respect to agriculture in the Critical Area: 1) identification of agricultural lands and establishment of programs for maintaining such lands in agricultural use; 2) assuring that farming in the Critical Area is conducted pursuant to a Soil Conservation and Water Quality Plan and that Best Management Practices are used on each farm; and 3) establishing specific requirements for farming to protect water quality and to conserve fish, plant and wildlife habitat. These are discussed in the following section.

Agricultural Protection Plan - Local governments are to identify and map any farm lands within their jurisdiction in the Critical Area. The regulations do not specify a minimum parcel size for such lands, thus local governments should establish criteria for identifying any land which supports activities meeting the definition of agriculture. In order to carry out other provisions of the local program, the ownership of the agricultural lands should also be determined.

An Agricultural Protection Plan is also required. In addition to the inventory and mapping required above, the Plan should also:

- 1) Overlay the Habitat Protection Areas designated in Chapter 9 onto the agricultural lands and provide for their protection;

- 2) Contain measures for encouraging the protection of agricultural lands (i.e., preventing their conversion to non-farming uses);

3) Incorporate the agricultural components of the State 208 Water Quality Plan into any existing local water quality plans; and

4) Require that on farms where timber harvesting is proposed, Forest Management Plans are to be prepared which are consistent with the requirements of Chapters 5 and 9 of the criteria.

The Agricultural Protection Plan is to be part of the local Critical Area Program submission and it will be reviewed by the Critical Area Commission.

Soil Conservation and Water Quality Plans and Best Management Practices - Within five years of the effective date of the criteria each farm, or portion thereof, in the Critical Area is required to have in place and be implementing a currently approved Soil Conservation and Water Quality Plan and a program of Best Management Practices approved by the local Soil Conservation District. Such plans and practices are to be developed or updated following the effective date of the criteria. Plans developed prior to that date should be reviewed by the Soil Conservation District to determine whether they conform to the requirements of the criteria. Where a landowner has signed up as a conservation district cooperator, but the District is unable to develop a plan within the required five years, the landowner may continue farming provided that the goals of the Law and all of the other policies and requirements of Chapter 6 are being met.

Specific Requirements - The criteria contain additional specific provisions governing farming activities in the Critical Area. They are:

- 1) Existing farms are to establish, as a required Best Management Practice, at the time of program approval, a minimum 25-foot vegetated filter strip landward from tidal waters, tidal wetlands or tributary streams. The filter strip is to be maintained until the Soil Conservation and Water Quality Plan for the farm is being implemented, provided that the Plan achieves equivalent water quality and habitat protection objectives. Other requirements for the filter strip are described in Chapter 9 of the criteria.
- 2) New farmland is not allowed to be created if it would involve any of the following:
 - a) diking, draining or filling of non-tidal wetlands (see Chapter 9 for further details);
 - b) clearing of forests or woodlands on soils with steep slopes (15 percent or greater) or on such soils with a slope of greater than five percent which also have

a "K" value greater than 0.35;

- c) clearing of existing natural vegetation in the Buffer; or
- d) clearing of land that would adversely affect or destroy the Habitat Protection Areas described in Chapter 9.

PROGRAM IMPLEMENTATION

There are three requirements for local jurisdictions regarding agriculture in the Critical Area. These are developing the Agriculture Protection Plan; ensuring adoption of Soil Conservation and Water Quality Plans; and adopting certain regulations governing the creation of new agricultural land. It is suggested that the following procedures be used to fulfill these requirements.

Agriculture Protection Plan - The first element of the plan is the identification and mapping of agricultural lands. Local jurisdictions, in identifying such lands, should consider using aerial photographs, field surveys, consultation with the Soil Conservation District or the local Agricultural Land Preservation Advisory Board, or other means to identify agricultural land use as of December 1, 1985. This date is important because it is likely that lands in agriculture as of that time will have to be included as part of the Resource Conservation Area as required in Chapter 2. If such lands are converted to non-farm uses between that date and the preparation of local plans, local jurisdictions should indicate this fact and record such conversions in their program submission. The local jurisdiction should also establish a process by which this information can be updated periodically so that future changes in the amount of agricultural land in the Critical Area can be determined.

Following completion of the inventory and mapping, the local jurisdiction should determine the name and address of each owner of farm land so that the requirements of the Critical Area Program can be disseminated to those persons. The local jurisdictions in cooperation with the local Soil Conservation District and the Maryland Department of Agriculture, will need to inform such persons that they will have to do the following:

- 1) Apply to the local Soil Conservation District (or other qualified agent) so they can prepare a Soil Conservation and Water Quality Plan and a program of Best Management Practices, and
- 2) If not present, or if a currently approved Soil Conservation and Water Quality Plan is being implemented to provide the same level of protection, establish a minimum 25-foot vegetated filter strip. (Land owners

should be requested to consult the Soil Conservation District to determine technical requirements for the filter strip.)

In addition, owners of farmland should be informed of the other specific requirements of the criteria restricting the clearing of new agricultural land and the requirements for Forest Management Plans for those farms which harvest timber.

The second element of the Agricultural Protection Plan is to identify where the Habitat Protection Areas designated in Chapter 9 occur on agricultural lands, including lands which are part of a farm, but which are in non-farm uses (i.e., forests and non-tidal wetlands). This can be done in conjunction with the inventory process described for the various habitats listed in Chapter 9. Once these Areas are identified, farm management measures must be such as to protect them.

The third Plan requirement is for the adoption of programs for protecting agricultural lands and for protecting water quality and plant and wildlife habitat. At a minimum, such programs should accomplish the following:

- 1) Incorporate the agricultural components of the State 208 Water Quality Plan into local water quality plans, if any exist. Where such local plans do not exist, this requirement can be met by providing that the Soil Conservation and Water Quality Plans developed by the local Soil Conservation District are consistent with the regional 208 plan for the jurisdiction.
- 2) Develop measures that encourage the protection of agricultural lands. These measures could include participation in the State's Agricultural Land Preservation Program or programs of the Maryland Environmental Trust, and encouraging Critical Area farms to form Agricultural Districts; developing local programs for accomplishing such purposes; enacting local ordinances which give agriculture preference over other uses; and affording tax incentives to owners of farmland. These, or other measures which might be adopted, should be included as part of the local jurisdiction's Critical Area Program submission.
- 3) Provide protection for the Habitat Protection Areas designated in Chapter 9. Generally, these protection measures would be the same as those required in Chapter 9 for each of the habitat areas. Those measures specific to agriculture (i.e., the 25-foot filter strip, restrictions on clearing in the Buffer, mitigation requirements for disturbance to non-tidal wetlands) are discussed in Chapter 9 and local jurisdictions need only reference that Chapter in this part of the Plan.

- 4) Require that a Forest Management Plan be prepared for timber harvests on farms which affect one acre or more in any one year interval and that such plans conform to the requirements of Chapters 5 and 9. This requirement can be met by reference to those Chapters.

Soil Conservation and Water Quality Plans - Local
jurisdictions are to indicate in their Program submission that the owners of farmland in the Critical Area have been informed of the requirement that they will need an approved Soil Conservation and Water Quality Plan, on such lands in the Critical Area, and that the Plan must be implemented within five years of the effective date of the criteria. It is the responsibility of the Soil Conservation District to prepare (or approve) the Plan and promote adoption of the Best Management Practices necessary to implement the Plan. If the District is unable to implement this requirement because of manpower limitations or other similar reasons, the owner of farmland may continue to farm provided:

- 1) all of the other requirements of this Chapter are being met; and
- 2) that the person is encouraged to use the practices listed in COMAR 14.15.06.03(5). However, if the landowner is unwilling to have a plan prepared and implemented, then that person may be subject to legal action by the local jurisdiction, or by the Department of Health and Mental Hygiene if the farm is in violation of State water quality requirements.

Specific Requirements - Local jurisdictions shall establish by regulation or other appropriate means, the following requirements:

- 1) Prohibit the diking, draining, or filling of any class or subclass of palustrine wetlands which have a seasonally flooded or wetter water regime, as described in COMAR 14.15.09.02, in order to create new agricultural land unless mitigation is accomplished, as provided for in COMAR 14.15.09.02.
- 2) Provide that the creation of new agricultural land is not accomplished by the clearing of forests or woodlands or soils with a slope of greater than 15% or on soils with a "K" value greater than .35 and a slope greater than 5%.
- 3) Require that within five years of criteria approval, all farms in the Critical Area have in place and are implementing an up-to-date Soil Conservation and Water Quality Plan.

- 4) Require that no clearing of new farmland can be accomplished within the Buffer described in COMAR 14.15.09.01.

CHAPTER 7 SURFACE MINING

INTRODUCTION

Surface mining, mainly for sand and gravel, exists within the Critical Area. Additional deposits of these mineral resources are available for future extraction. In general, surface mining operations are regulated under existing State law. The Commission recognized that these resources make a significant contribution to the State's economy, but also recognized that mining operations, if not properly managed, can result in sedimentation and other adverse impacts on aquatic resources.

CRITERIA REQUIREMENTS

The criteria impose two requirements on local jurisdictions. The first is that lands are to be identified and mapped which contain known mineral resources but which are not now being used for mining operations. The intent of this requirement is to prevent use of such lands for purposes which would limit their future availability for mineral extraction. The mapping should also indicate where Habitat Protection areas, as defined in Chapter 9, exist over such mineral reserve areas and thus preclude the use of such areas for mining. Local jurisdictions should also indicate, to the extent it would be possible at the time of critical area program development, the anticipated post-excavation use of such lands. Where such post-excavation development for residential, commercial, or industrial purposes is proposed, it should conform to the criteria in Chapter 2.

The second requirement is for local jurisdictions to identify areas that are unsuitable for future sand and gravel operations and to prohibit such operations from occurring therein. The unsuitable areas include the Buffer and other Habitat Protection Areas described in Chapter 9; areas of highly erodible soils; and areas of existing agriculture or forestry use which, if converted to mineral extraction, could not be used for farming or forestry for 25 years or more. The latter requirement means that if a mining operation is proposed on existing farm land or forest land, and the mining operation including reclamation, could not be completed within 25 years, then that operation should not be allowed. The intent of this requirement is to encourage mining operations to minimize the extent of land disturbed at any one time and to provide for reclamation as soon as possible after extraction is completed.

The only requirement in the criteria for existing sand and gravel operations is that they observe, to the extent possible, the 100-foot Buffer and existing State and local regulations.

PROGRAM IMPLEMENTATION

Existing Mining Operations - Local jurisdictions should notify existing operations of the requirement that the Buffer should be observed to the fullest extent possible. In turn, the legal owner or operator of the operation should be required to certify to the local jurisdiction that all such operations are observing the Buffer, and where they are not, the conditions which exist that prevent them from observing this requirement. It would not be sufficient to claim inconvenience or minor economic hardship as a causal factor, since the criteria require observance of the Buffer to the extent possible.

Future Mining Operations - It is suggested that local jurisdictions address future mining operations using the following process:

1. Request from the Department of Natural Resources, Maryland Geological Survey (see below) maps or other information which allow identification of mineral resources in the Critical Area. If no such mineral resources exist, then further action is not required.
2. If potential mineral resource sites are present, provide for the following:
 - a) Adopt appropriate regulations which declare that new surface mining operations shall be prohibited on highly erodible soils defined in Chapter 1 and in the Buffer and other Habitat Protection Areas defined in Chapter 9;
 - b) Map the potential resource sites so that their extraction potential can be considered when other forms of development are proposed for such sites.
 - c) Propose to the Critical Area Commission at the time of local program submission the anticipated post-excavation use of mineral resource sites (if known) and signify that if development of a site is anticipated, that such development will meet the requirements of Chapter 2; and
 - d) Where mineral resource sites are overlaid by productive agriculture or forest lands, provide, through regulation or other appropriate means, that mining of such sites shall be required to be completed within 25 years and the site returned to its former agricultural or forest use.

SOURCES OF ASSISTANCE

Most of the information required to implement the requirements of this Chapter is available from the Department of Natural Resources. The location of unexploited or potentially available mineral resources is being mapped and such maps will be made available by the Maryland Geological Survey. Maps have generally been completed for the Western Shore counties; Eastern Shore areas are expected to be finished in 1987. The identity of owners of existing mining operations is available from the Surface Mining Division of the Water Resources Administration. Advice on measures which may be required of existing operations in order to observe the Buffer requirements is also available at the Surface Mining Division.

CHAPTER 8 NATURAL PARKS

INTRODUCTION

A significant problem associated with the long-term recovery of the Bay ecosystem is the fact that many impacts to the Bay originate in the upland areas beyond the Critical Area.

It is difficult for the people contributing to these impacts to perceive that they are the source of some of the Bay's problems because they are usually separated by distance and time from the location of the impact.

Visits to Natural Parks can be opportunities for people to acquire a personal understanding of the processes and potential benefits of coastal habitat and Bay resources. These experiences can improve the quality of the Bay's resources by instilling a realistic attitude toward the natural environment and therefore, can influence the actions of park visitors who live throughout the Bay's watershed - particularly the way they treat soil and water resources. For some of the Bay's problems, education is the only answer. These criteria encourage the establishment of Natural Parks within local jurisdictions.

PROGRAM REQUIREMENTS

The criteria require local jurisdictions to:

- 1) Identify areas within their Critical Area where Natural Parks could be established; and
- 2) Consider conserving, through various means, the geological and biological resources of such areas which exemplify coastal ecosystems. In managing natural parks, the criteria suggest that priority should be given to providing a quality education experience, and protecting significant natural features, rather than maximizing visitation.

In considering areas where Natural Parks could be established, local jurisdictions may propose use of existing federal, State or locally-owned public lands for these purposes. For example, some existing parks or wildlife areas, because of their special features could serve as natural parks and development of educational programs that illustrate the functions of estuarine ecosystems of these areas would fulfill the intent of the criteria.

CHAPTER 9
HABITAT PROTECTION AREAS

INTRODUCTION

This section contains policies and criteria for conserving or protecting fish, plant and wildlife habitat as required by the Critical Area Law. Protection is to be provided for habitats of national, Statewide, or local significance or for those which are not already regulated by other State or federal programs.

HABITAT PROTECTION AREA PLAN

Local jurisdictions are required to identify and provide protection for the habitat areas described in the five sections of this Chapter. A Habitat Protection Area Plan is also required by the provisions of Chapter 10, Regulation 01.E.(4). The criteria do not contain specific requirements for the content and form of such a Plan, however it should contain the following minimum elements, each of which are discussed in the sections to follow:

1. Buffer management guidelines (as described on p.54) and regulations proposed or adopted to protect the integrity of the Buffer;
2. A Non-Tidal Wetland Protection Program (see p.57);
3. Regulations proposed or adopted to protect the habitats of any threatened or endangered species or specie in need of conservation;
4. A Plant and Wildlife Protection Program (see p.68);
5. Regulations adopted or proposed for the protection of anadromous fish spawning streams and their watersheds.

Each of the above elements may be described by reference to appropriate sections of this Chapter. Other minimum elements are:

6. Evidence that the local jurisdiction has considered the presence of contiguous habitats in adjacent jurisdictions and provided for joint protection measures where appropriate.

7. Evidence that the local jurisdiction has developed a means for applying, to the extent possible, the protection requirements of this Chapter to those developments described under Grandfathering in Chapter 2, Regulation .07.
8. A description of how this plan is incorporated into the local process for considering and approving development projects.

REGULATION 01: BUFFER

INTRODUCTION

A Buffer is a required element of the Critical Area law, and hence, of the Program. Generally, buffers are areas of natural or planted vegetation that are used to separate land and water uses and to filter pollutants in land run-off before they enter receiving waters.

Buffers have been established in a number of shoreline protection programs in other states and regions. Each differs with respect to its functions and widths and the kinds of activities permitted to occur within them. In some programs, buffers were established partly for scenic or aesthetic purposes, a function not provided for under the Critical Area law. In others they have been prescribed to protect water quality or fish and wildlife resources.

An extensive review of these other programs was undertaken to determine which of the buffer concepts would be applicable to the Chesapeake Bay and the Maryland Critical Area Program. The Commission determined that a buffer, to fulfill the objectives of the Law, should serve the following functions: filter land run-off; prevent disturbance to wetlands, shorelines and stream banks; maintain an area of transitional habitat between aquatic and upland communities; protect stream water quality; and protect riparian habitat.

How wide must a buffer be to provide all of these functions? The buffer width of other programs varies depending on the resources being protected and type of activity or disturbance being addressed. For example, a minimum 150-foot buffer has been recommended between septic systems and streams where nitrate pollution is a problem. For wildlife protection, a 300-foot corridor or buffer has been used in certain instances. For commercial logging on flat land, a 50-foot buffer is often recommended. The Commission decided that a 100-foot wide minimum buffer would be appropriate for Maryland conditions in order to enable this area to fulfill the desired functions indicated above and the objective of the Law.

CRITERIA REQUIREMENTS

The criteria generally require the establishment of a minimum 100-foot naturally vegetated or planted buffer landward from the Mean High Water Line of tidal waters or from the edge of tidal wetlands or tributary streams. The tidal limits are shown on the State Wetland Maps. Streams are those perennial and intermittent streams in the Critical Area which are so noted on the most recent U. S. Geological Survey 7½ minute topographic quadrangle maps or as noted on more detailed maps or studies cited by the local jurisdiction. The Buffer must be expanded to

include adjacent hydric or highly erodible soils or steep slopes as defined in the criteria.

Within the Buffer, new development activities are generally not permitted including structures, roads, parking areas and other impervious surfaces, mining and related facilities, septic systems and the substantial alteration of existing facilities or structures. Also, no clearing of new agricultural land within the Buffer is permitted. However, as indicated in Chapter 3, certain activities and structures necessarily associated with water-dependent facilities may be permitted within the Buffer. In addition, commercial harvesting of trees beyond the first 50 feet of the Buffer along tidal waters and perennial streams and to the edge of intermittent streams is allowed under certain circumstances and provided that the cutting is conducted pursuant to a buffer management plan. Similarly, cutting of trees in the Buffer is allowed for personal use, providing that such trees are replaced on an equal basis; for horticultural purposes; to prevent stream blockage or damage to buildings from falling trees; to install needed shore erosion protection measures; to prevent extensive pest or disease infestation; or to prevent a threat from fire. A summary of allowed and restricted activities in the Buffer is shown in Table 3.

TABLE 3
 ALLOWED, RESTRICTED AND PROHIBITED
 USES IN THE BUFFER

<u>TYPE OF USE</u>	<u>RESTRICTIONS</u>
1. New Development Activities (Structures, roads, parking areas, impervious surfaces, mining and septic systems)	Not allowed, except for water-dependent facilities (See below)
2. Alteration of Existing Structure	Minor alterations allowed; substantial alteration prohibited
3. Agriculture (Except livestock operations)	Existing farming and construction of farm-related structures permitted, except that a 25-foot filter strip is required to be established. (This strip may later be modified or eliminated). New or expanded farming operations which require the cutting or clearing of existing natural vegetation in the Buffer are prohibited.
4. Agriculture (Livestock operations)	Feeding and watering must be set back 50 feet from the water's edge; grazing is permitted, providing that it does not disturb stream banks or shorelines.
5. Commercial Harvesting	Allowed only for selection cutting or the clearcutting of Loblolly pine to within 50 feet of the shoreline or perennial streams or to the edge of intermittent streams, providing that the cutting does not occur in a Habitat Protection Area described in this Chapter and is done pursuant to a buffer management plan.
6. Other Cutting or Clearing of Trees	Allowed only for the following purposes:

* For personal use providing that Buffer functions are not impaired and trees cut are replaced;

* To prevent trees from falling and blocking streams, causing damage to dwellings or other structures, or resulting in accelerated erosion of the shore or streambank.

* In conjunction with horticultural practices used to maintain the health of individual trees.

* To provide access to private piers;

* To install or construct an approved shore erosion protection device or measure.

* To install or construct a water-dependent facility.

* To protect forests from extensive pest or disease infestation or threat from fires.

* To manage the Buffer so that it can achieve its habitat and water quality functions.

7. Water-Dependent Facility

Allowed subject to the requirements and limitations of Chapter 3.

8. Shore-Erosion Protection Device or Measure

Allowed subject to the requirements and limitations of Chapter 4.

In some parts of the Critical Area, residential, commercial or industrial uses already exist within the Buffer area and in such cases, all of the functions of the Buffer, as stated above, could not be served. In these areas, local jurisdictions may request an exemption from the Buffer requirements, providing that alternative measures for achieving the water quality and habitat protection goals of the Buffer are proposed. Such measures may include public education programs for shorefront homeowners which would address topics such as minimizing fertilizer run-off from lawns or the value of leaving natural vegetation at the shoreward edge of the property. Other appropriate measures could include neighborhood-sponsored habitat protection or water quality programs. Where these exempted areas are re-developed, the criteria require that the Buffer be established.

In addition to the above exemption, the Critical Area Law specifically provides that existing agriculture be allowed to continue within the Buffer area. However, as a Best Management Practice, the criteria require the establishment of a minimum 25-foot vegetated filter strip on all existing agricultural fields within the Buffer. Guidelines for the composition and width of the filter strip are described in the criteria. This strip is to be maintained until the Soil Conservation and Water Quality Plan, required for all farms in the Critical Area, is being implemented and specifies alternative measures for achieving water quality and habitat protection goals equivalent to the filter strip. It is anticipated that the Commission will work with the Soil Conservation Service and the Maryland Department of Agriculture to develop guidelines for such alternative measures. In regard to livestock, the criteria require that the feeding and watering of livestock be set back 50 feet from tidal waters and tributary streams, but that grazing is permitted within the Buffer provided that such grazing does not disturb stream banks, shorelines or Habitat Protection Areas described in this Chapter. Also, implementation of a grassland and manure management program is required for livestock operations in the Buffer.

New agricultural land cannot be created by the cutting or clearing of existing natural vegetation within the Buffer. When agricultural activity ceases, or agricultural land is proposed to be used for other purposes, the Buffer is required to be established. Thus, where new residential development of existing farm land occurs, the Buffer requirements would have to be observed.

PROGRAM IMPLEMENTATION

The criteria provide for the establishment and management of the Buffer. It is suggested that local jurisdictions use the following process in meeting these requirements.

1. Establish the Buffer - Using the State's tidal wetlands maps, local jurisdictions should delineate the Buffer on

tax maps or other appropriate instruments so that property owners and local officials are aware of the Buffer boundary. The area of the Buffer along intermittent streams should be specifically designated in order to note where commercial timber harvesting operations may be permitted to the edge of such streams, if they meet the other requirements of this section.

2. Determine Buffer Management Guidelines - The criteria require that the Buffer is to be managed to fulfill the following functions:

- a) Provide for the removal or reduction of sediments, nutrients, and potentially harmful or toxic substances in run-off entering the Bay and its tributaries;
- b) Minimize the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources;
- c) Maintain an area of transitional habitat between aquatic and upland communities;
- d) Maintain the natural environment of streams; and
- e) Protect riparian wildlife habitat.

Generally, a relatively mature forested condition with understory vegetation and an undisturbed forest floor would best enable the Buffer to fulfill these functions. Achieving such a condition should be the goal of buffer management plans prepared for any commercial harvesting in the Buffer and should guide cutting that is conducted by private land owners for personal use. The Commission recognizes, however, that particular conditions of existing development, microclimate, shore erosion and adjacent land use will affect the extent to which these conditions can be maintained or achieved. In order to provide for these differences, local jurisdictions should develop overall management guidelines for the Buffer area along their shorelines, and include a description of such guidelines as part of the Habitat Protection Plan referred to in Chapter 10 and discussed in the Introduction to this Chapter.

The Buffer Management guidelines should be developed in cooperation with the Coastal Resources Division of the Tidewater Administration and the Maryland Forest, Park and Wildlife Service. They should specify management goals for the Buffer area based on the following factors:

- a) Presence of habitat protection areas as identified in this Chapter (e.g., non-tidal wetlands, habitats of threatened and endangered species and species in need of conservation, plant and wildlife habitat

areas, anadromous fish spawning streams).

- b) Contiguous riparian forests.
 - c) Buffer providing a wildlife corridor or connecting mature forest areas.
 - d) Extent of adjacent disturbance (i.e., extensive residential or other development).
 - e) Adjacent agricultural lands.
 - f) Rate of shoreline erosion.
3. Establish Buffer Regulations - Local jurisdictions are required to provide, by regulation or other appropriate means, that the Buffer restrictions described in this Section shall be observed. Other restrictions, limitations, or non-regulatory means (e.g., community oriented programs) proposed pursuant to managing the Buffer to achieve the goals previously stated, should be included in the local program submission.
4. Buffer Exemption - The criteria provide that if the existing pattern of residential, industrial, commercial, or institutional development prevents the Buffer area from fulfilling the functions listed earlier, the local jurisdiction may request an exemption of such areas from the Buffer requirements. In requesting an exemption, the local jurisdiction would need to do the following:
- a) Demonstrate that existing development patterns prevent the Buffer from fulfilling its functions; and
 - b) Propose alternative measures for achieving the water quality and habitat protection functions of the buffer. Alternative measures may include, but are not limited to, urban forestry, stormwater management, erosion control, and public education programs. The Maryland Forest, Park and Wildlife Service, the Commission staff, and the Coastal Resources Division of the Tidewater Administration will be able to assist local jurisdictions in developing such alternative measures.

It should also be noted that any new, expanded or redeveloped industrial or port-related water-dependent facility planned by the local jurisdiction could only occur in an area exempted from the Buffer requirements. If such developments are planned, local jurisdictions should include this information in their program submission.

REGULATION 02: NON-TIDAL WETLANDS

INTRODUCTION

Non-tidal wetlands are valuable areas for fish and wildlife habitat, are vital to the maintenance of water quality in adjacent or downstream waters and provide flood control benefits. No Statewide measures have heretofore been instituted to protect these areas. In these criteria, the Commission has identified certain types of non-tidal wetlands which have significance for the protection of water quality and habitat and has provided for their protection. Protection measures include a requirement for establishing buffers around the wetlands and minimizing land disturbances in their watersheds.

IDENTIFICATION

The criteria apply to those non-tidal wetlands classified as "palustrine", a term used to describe fresh-water wetlands that contain trees, shrubs, emergent plants or lichens and such wetlands occurring in tidal waters of very low salinity (less than one-half parts of salt per 1,000 parts of water). The other types of wetlands and deep water habitats which are not addressed by these criteria include: Marine (occurring in the open ocean); Estuarine (occurring in estuaries such as the Chesapeake Bay); Riverine (occurring in river channels); and Lacustrine (occurring in lakes or reservoirs). Generally, Palustrine wetlands are called fresh-water marshes, swamps or bogs, as distinguished from the tidal wetlands found throughout most of the Bay. They occur at or near the heads of tributary streams, or in depressions in upland areas where the water table is at, or near the surface or where the soil or substrate is covered by shallow water at some time during the growing season. There are eight classes of Palustrine wetlands, however, these criteria only address four of these: Aquatic Bed, Emergent, Forested, and Scrub-shrub. Details of the wetlands classification system may be found in the following publication:

Classification of Wetlands and Deepwater Habitats of the United States, Publication FWS/OBS-79/31, December 1979, Fish and Wildlife Service, U. S. Department of the Interior.

Non-tidal wetlands in the Critical Area have been mapped by the U.S. Fish and Wildlife Service as part of the National Wetlands Inventory using the classification system described in the above publication. The maps are at a scale of 1" = 2,000' and are housed in and copies are available from, the Wetlands Division of the Water Resources Administration, Maryland Department of Natural Resources. Each wetland is delineated and identified by a code which indicates the system, class, subclass and water regime of that wetland. The wetlands afforded protection in the Critical Area Program have the characteristics shown in Table 4.

TABLE 4

Non-Tidal Wetland Types
Afforded Protection in the
Critical Area

Ecological System	Palustrine (P)
Class Aquatic Bed (AB)	
Subclass	All Subclasses (1-7)
Class Emergent (EM)	
Subclass	All Subclasses (1-6)
Class Scrub/Shrub (SS)	
Subclass	All Subclasses (1-7)
Class Forested (FO)	
Subclass	All Subclasses (1-7)

The criteria require local jurisdictions to identify and provide protection for the Palustrine wetlands of one acre or larger, which are described above and identified on the National Wetlands Inventory Maps. Other such non-tidal wetlands of any size not shown on the Inventory Maps must also be protected if it can be shown by site survey or other means at the time of application for a development activity, that the wetland is hydrologically connected to streams, tidal wetlands or tidal waters. Finally, protection measures are required for other non-tidal wetlands which are determined to be of special significance to fish, wildlife or plant habitat by the Maryland Natural Heritage Program, the Coastal Resources Division, or the Maryland Forest, Park and Wildlife Service of the Department of Natural Resources, the local jurisdiction, or other appropriate agencies. It is expected that the latter identifications will be made prior to the completion of the local jurisdiction's Critical Area Program. If such wetlands are subsequently found or identified, and protection measures are required, local hearings must be held to consider public comments on these measures.

The Commission recognizes that the scale of the National Wetlands Inventory (1" = 2,000') may be too large to permit an identification of a wetland for regulatory purposes (e.g., for evaluation of a subdivision proposal). Rather than conducting a field check of each wetland prior to submitting their Critical Area Program, local jurisdictions may wish to use the wetland maps as "flags", and propose a process for site survey at the time an activity is proposed which could disturb a wetland.

PROTECTION REQUIREMENTS

The criteria require two types of protection measures for the non-tidal wetlands identified above. First, a minimum 25-foot buffer is to be established around the wetland within which new development activities, or other activities which may disturb the wetland, are prohibited. To the extent practicable, the 25-foot buffer should be kept in, or returned to, natural vegetation. Encroachment into the 25-foot buffer may be permitted if findings are made that the activity proposed will not adversely affect the wetland or the wildlife contained therein.

In addition, local jurisdictions are required to protect the hydrologic regime of wetlands by minimizing land disturbances in their drainage areas. Such a disturbance might include a proposal to substantially increase the amount of impervious surfaces in the watershed of the wetland. In this instance, runoff from these surfaces should be controlled so that the pre-development surface and subsurface water regime of the wetland is maintained. Local jurisdictions should also require an applicant for a development activity in those watersheds to determine that the activity will not impair an off-site wetland.

MITIGATION REQUIREMENTS

Alterations to non-tidal wetlands located within the Buffer are not permitted. Under some circumstances, alterations to non-tidal wetlands located outside the Buffer in the Critical Area may be permitted. Such alterations must be associated with activities or operations which are either 1) water dependent; or 2) of substantial economic benefit. The proposer of the activity must demonstrate that either of these conditions apply. It must also be shown that the alteration is both necessary and unavoidable in executing the activity or operation. That is, there are no alternative measures or sites available which could be used to avoid the wetland alteration. If, using these tests, the impact is still unavoidable, then the proposer of the activity is required to prepare a plan for mitigating the alteration.

Mitigation means compensating for the impact by replacing, or providing a substitute for, the wetland. The plan is to show measures to be used for providing water quality benefits and plant and wildlife habitat equivalent to that of the wetland to be altered or destroyed. The mitigation measure should be effected as near to the affected wetland as possible. Mitigation is not required for alterations to temporarily flooded or drier wetlands where the alteration is the result of diking, draining, or filling associated with the creation of new agricultural land. The grazing of livestock in the wetland is not generally considered to have adverse impacts because it is assumed that the grazing will occur infrequently.

Mitigation plans for non-agricultural activities which are submitted to local jurisdictions must be submitted for comment to the Coastal Resources Division of the Department of Natural Resources. Where the water quality function of the wetland is significant, the plan may also be submitted to the Office of Environmental Programs of the Department of Health and Mental Hygiene. The U.S. Fish and Wildlife Service, Annapolis Office, has particular experience and competence in wetlands mitigation and should, in most cases, also review such plans. If the local jurisdiction intends to approve a project, it must find that the plan as proposed or modified to address agency comments, provides sufficient mitigation, and it must direct the proposer to implement the required mitigation measures.

Mitigation plans for agricultural operations are to be reviewed by the local Soil Conservation District with the assistance of the Department of Natural Resources. However, the Commission expects that local jurisdictions will conduct the initial reviews of such proposed wetland alteration since the jurisdiction must evaluate the project with regard to its economic benefit and whether alternative measures exist to the project.

The Commission expects to provide guidance in the future to local jurisdictions for assessing whether projects represent "substantial economic benefits" and for determining the kinds of analyses that applicants should conduct to demonstrate that alternatives to the project were pursued and found not to be feasible.

REGULATION 03: THREATENED AND ENDANGERED SPECIES AND SPECIES IN
NEED OF CONSERVATION

INTRODUCTION

Plant and animal habitat protection is required by the Critical Area Act. Elsewhere in the regulations (Regulation .04 of Chapter 9), criteria have been developed to protect certain plant and animal communities of Statewide significance. In this Regulation, the Commission addresses those particular species whose continued existence are in question, or are in jeopardy as determined by the Secretary of the Maryland Department of Natural Resources or the Secretary of the U. S. Department of the Interior. The limited distribution of the habitats of these species make them highly susceptible to local land disturbances. Protection measures are specified for the habitats of these species and a variety of approaches are suggested for local jurisdictions to develop programs to achieve their protection. Also included are provisions for public hearings in connection with local protection programs.

IDENTIFICATION

Designations of threatened and endangered species have been made by the Secretary of Natural Resources. Those which are known or thought to inhabit or occasionally use habitats in the Critical Area are the following:

<u>Species</u>	<u>Critical Area County of Existing Occurrence</u>
Bald Eagle	All but Baltimore
Delmarva Fox Squirrel	Cecil, Kent, Queen Annes, Talbot, Dorchester, Somerset, Worcester, <i>Wicomico</i>
Peregrine Falcon	Dorchester, Somerset, <i>Baltimore</i>

No designations have been made of "species in need of conservation". However, candidate species are presently under review by the Department of Natural Resources and it is anticipated that some designations will be made in 1986. The Commission will review any such species to determine if they occur in the Critical Area and the extent to which they could be afforded protection under these criteria. The Commission will inform local jurisdictions if protection programs for such species will be required as part of the Critical Area Program. If additional species are designated by the Secretary in the future, local jurisdictions are required to develop protection measure within 12 months of the Secretary's designation.

CRITERIA REQUIREMENTS

The criteria direct local jurisdictions to develop protection programs for all of the habitats of the species designated above which occur in the Critical Area within the jurisdiction. The Commission intended that such programs be a cooperative effort between local jurisdictions and State agencies, particularly the Maryland Natural Heritage Program and the Maryland Forest, Park and Wildlife Service, and any other appropriate agency or organization with expertise in the protection of these habitats.

Two approaches to habitat protection are proposed in the criteria. Local jurisdictions must use either of these or both where necessary. They are:

- 1) Designate a protection area around the habitat(s) where disturbance (such as from new development or the cutting of trees) would be prohibited unless it could be shown that such disturbances would not cause adverse impacts on the habitats or species being protected.
- 2) Develop protection programs which can include acquisition of the habitat, conservation easements, cooperative agreements with landowners, specific provisions in local regulations, and other such measures as listed in the criteria [Section C(2)(b)].

PROGRAM IMPLEMENTATION

In order to develop the protection programs indicated above, local jurisdictions will need to have maps showing the location of the habitats. Such maps will be made available by the Maryland Forest, Park and Wildlife Service or the Maryland Natural Heritage Program. Protection measures for the habitats are to be developed in a joint effort between the local jurisdiction and these agencies.

Protection measures may be developed in either of two ways. Local jurisdictions may determine measures for each of the habitats during program development. In this case, the public hearing process on the local Critical Area Program will satisfy the public review requirement of the criteria. Alternatively, local jurisdictions may elect to defer development of protection measures for each habitat until such time as an activity is proposed which might adversely affect the habitat. If this approach is used, a process should be described in the program submission which would ensure that protection measures are applied in a timely and effective manner and that they would be subject to adequate public review.

REGULATION 04: PLANT AND WILDLIFE HABITAT

INTRODUCTION

The Critical Area Act requires that protection be given to wildlife and plant habitat. The Commission sought to focus this broad mandate by identifying, and providing protection for, only those plant and wildlife habitats which are of particular significance from a State-wide or local perspective owing to their uniqueness, rarity or likely diminution in the future, and which are not already protected or addressed by other existing programs. Under these guidelines, habitats identified for protection include: colonial water bird (herons, egrets, terns and glossy ibis) nesting areas; aquatic areas of historic waterfowl concentration; riparian forests (for example, forested areas of 300 feet in width along streams and the Bay's shoreline); relatively undisturbed, large forest patches (for example, those of 100 acres or more) which support breeding populations of forest interior dwelling birds (such as vireos, warblers, flycatchers and woodpeckers); certain plant and animal communities which are the best examples of their kind in Maryland; and other areas determined to be of local significance. In general, protection measures for these habitats permit some development and forestry activities to occur in or near such areas if they are conducted in a manner that conserves the wildlife and plants contained therein.

IDENTIFICATION

The habitats required to be protected in this Section are as follows:

1. Colonial water birds (herons, egrets, terns and glossy ibis) - These species of birds congregate or colonize during the nesting season and such nesting sites are found in relatively few areas. Most of these sites have been identified and mapped by the Maryland Forest, Park and Wildlife Service and this information will be made available to local jurisdictions. Complete maps for the Critical Area will be furnished by June of 1986. The designations will be made on the State wetlands maps.
2. Waterfowl staging and concentration areas - The criteria require protection of waterfowl in their historic aquatic staging and concentration areas. Such areas have been identified and mapped by the Maryland Forest, Park and Wildlife Service and will be made available to local jurisdictions on the State wetlands maps. It is recognized that in some areas of historic concentration, waterfowl may not be present currently because of the disappearance of submerged aquatic vegetation beds. However, the Commission assumes that restoration of

these beds is a possibility in the future and that these areas should not be usurped by other uses.

3. Riparian forests - These forest areas are afforded protection where they contain breeding populations of forest interior dwelling birds. Such species are listed in Table 5. The criteria suggest that forests of 300 feet or more in width adjacent to the Bay shoreline, tidal wetlands or tributary streams would support populations of such birds. However, 300 feet is intended to be a general guideline and populations may be present in narrower forests or absent in wider ones.

The Maryland Forest, Park and Wildlife Service will be able to assist local jurisdictions in the mapping of those riparian forests likely to support forest interior dwelling birds. Designations will be made on the State wetlands maps. These designations may be considered as "flags" so that more detailed site surveys can be made at the time that a new development activity or timber harvesting is proposed in order to document the presence of these birds during the breeding season. It should be noted that such surveys can only be done during the breeding season and must be carried out using standard biological survey techniques (i.e., the singing male census). The Commission will, in the future, issue further guidance on the identification and protection of these species.

4. Large forest areas - The same requirements and considerations discussed above for riparian forests apply to these areas. The Maryland Forest, Park and Wildlife Service will assist local jurisdictions in mapping these areas. The mapping should include the identification of any existing forest corridors between riparian and upland forests or between upland forests, which may serve as corridors for the movement of the bird species shown in Table 5, as well as other animals.
5. Other important plant and wildlife habitat areas - The criteria provide that protection be given to other important plant or wildlife habitat areas which may, in the future, be identified by State and federal agencies. It is expected that the Commission will develop guidelines for including such habitat areas in the Critical Area Program and providing for their protection.
6. Other plant and wildlife habitat of local significance - Local jurisdictions are enabled to provide protection for plant and wildlife habitat areas determined to be of local significance. The criteria do not limit the kinds of habitats which may be afforded protection under this provision, however, such areas should be identified

TABLE 5

List of Forest Interior Dwelling Bird Species
Afforded Protection in the Critical Area

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
*American redstart	Stetophaga ruticilla
Flycatcher, Acadian	Empidonax virescens
*Hawk, broad-winged	Buteo platypterus
*Hawk, Cooper's	Accitpiter cooperii
Ovenbird	Seiurus aurocapillus
*Owl, barred	Strix varia
Scarlet tanager	Piranga olivacea
Vireo, red-eyed	Vireo olivaceus
Vireo, yellow-throated	Vireo flavifrons
Warbler, balck-and-white	Mniotilta varia
*Warbler, hooded	Wilsonia citrina
Warbler, Kentucky	Oporornis formosus
*Warbler, Swainson's	Limothlypis swainsonii
*Warbler, worm-eating	Helmitheros vermivorus
Waterthrush, Louisiana	Seiurus motacilla
Whip-poor-will	Caprimulgus vociferus
Chuck-will's-widow	Caprimulgus carolinensis
Woodpecker, hairy	Picoides villosus
Woodpecker, pileated	Dryocopus pileatus

* Species especially sensitive to disturbance

in the local Critical Areas Habitat Area Protection Plan.

7. Natural Heritage Areas - These areas are communities of plants and animals which contain endangered or threatened species or species in need of conservation and which have been formally designated as Natural Heritage Areas by the Secretary of the Department of Natural Resources. No such areas have been designated to date. When they are, local jurisdictions will be notified and provided with appropriate maps and suggested Protection measures.

PROTECTION MEASURES

The criteria require that certain protection measures be provided for the habitats listed previously.

For all of these habitats, local jurisdictions may wish to use the mapping or other designation described above to generally delineate such areas, but to develop site-specific protection measures only when a new development activity or other potential disturbance (i.e., timber harvesting) is proposed. If local jurisdictions elect this option, a process should be presented in their local program to ensure that the habitats would be adequately protected. Site-specific protection measures should be developed cooperatively by the local jurisdiction, and the Maryland Forest Park and Wildlife Service, the Maryland Natural Heritage Program, the Tidewater Administration, and where appropriate, the U. S. Fish and Wildlife Service.

1. Colonial water birds - Two measures are indicated in the criteria. First, the nesting habitats of these species should be protected from physical alteration such as from new development or from other activities such as timber harvesting. Second, these habitats should be protected from disturbance during the Spring nesting season. Disturbance to nesting birds might include construction activity and pile driving, activities that disrupt breeding birds and which can be fatal to young or cause flight by adults. It is recommended that protection measures for each site be developed cooperatively by the local jurisdictions and the Maryland Forest, Park and Wildlife Service.
2. Waterfowl staging and concentration areas - These are afforded protection only when new water-dependent facilities (as described in Chapter 3) are proposed which could adversely affect such areas. The criteria require that these facilities shall be so located as to avoid disturbance to waterfowl using these concentration areas.
3. Riparian forests - The criteria provide that where development activities or the cutting or clearing of trees occur in these areas, that such activities are conducted in a manner that conserves forest interior dwelling species and their habitat. A number of techniques or measures are suggested for accomplishing these purposes such as site design requirements, and specific protection provisions in Forest Management or Soil Conservation Plans. Protection also must be afforded to forested corridors between riparian areas and upland forests so that those areas can continue to serve as passageways between habitat areas.
4. Large forest areas - Protection measures are the same as No. 3 above.

5. Other plant and wildlife habitat - No specific protection measures are suggested for these habitats although a buffer area around such sites is required where it would be appropriate. It is anticipated that any habitats identified would be protected on a site-specific basis using best professional judgement. The Commission expects that when these areas are proposed by State or federal agencies for protection, that protection measures appropriate to the species and the site would accompany such proposals and would be implemented cooperatively with the local jurisdiction.
6. Plant and wildlife habitat of local significance - Protection measures for these habitats are left to the discretion of the local jurisdiction.
7. Natural Heritage Areas - These areas are to be protected from development activities or the cutting or clearing of trees by measures that would: a) maintain the structure of the plant community of the site; and b) ensure that the overall species composition of the plant and animal community is retained. No specific measures are proposed in the criteria.

PROGRAM IMPLEMENTATION

The criteria require local jurisdictions to develop a Plant and Wildlife Habitat Protection Program as an element of their Critical Area Program. The Commission expects that appropriate agencies in the Maryland Department of Natural Resources, and the U. S. Fish and Wildlife Service will assist in the development of these Programs. The Program has two elements, identification of the habitats and providing for their protection.

As indicated earlier, the maps or other material required for habitat identification will be furnished to local jurisdictions. The Commission also expects to have copies of these maps, therefore, unless they are reformatted or re-mapped, local jurisdictions need not submit them with their program document as long as they are adequately identified and dated. However, evidence should be presented to demonstrate that each of the habitats has been afforded protection.

Protection measures may be developed in either of two ways. Local jurisdictions may determine measures for each of the habitats during program development. In this case, the public hearing process on the local Critical Area Program may satisfy the public review requirement of the criteria. Alternatively, local jurisdictions may elect to defer development of protection measures for each habitat until such time as an activity is proposed which might adversely affect the habitat. If this approach is used, a process should be described in the program

submission which would ensure that protection measures are applied in a timely and effective manner and that they would be subject to public review. In both cases, the Commission expects that the measures selected would result from a cooperative effort between the local jurisdictions and the appropriate State and federal agencies.

REGULATION 05: ANADROMOUS FISH PROPAGATION WATERS

INTRODUCTION

The Commission addressed the requirement of the Act to conserve fish habitat by considering, on a species by species basis, the extent to which fish habitat protection could be achieved by the Critical Area Program and whether protection measures would duplicate or overlap already existing State and federal programs. The Commission concluded that anadromous fish, because they spawn in or move through tributary streams in the Critical Area, could be effectively addressed in the program. Moreover, such species have substantial economic benefit to the State's economy, but have undergone severe declines in abundance over the past decade apparently due to deteriorating water quality. Maintaining or improving the quality of their spawning areas or their access to such areas was thus determined to be an appropriate Commission objective. The criteria contain protection measures to maintain or improve the physical condition of spawning streams, and to minimize land disturbances in the watersheds of such streams which may have adverse impacts on the water quality of spawning areas.

IDENTIFICATION

Anadromous fish propagation waters are those streams tributary to the Bay where rockfish, yellow perch, white perch, shad and river herring spawn or where such spawning has occurred in the recent past. Identification of these streams has been made through field surveys conducted by the Fisheries Division of the Maryland Tidewater Administration. All tributary streams have been surveyed except for several on the lower Eastern Shore and that area will be completed in the Spring of 1986. The Tidewater Administration will provide this information to local jurisdictions. It should be noted that in some cases spawning occurs upstream from the initial planning area boundary for the Critical Area (e.g., beyond 1,000 feet upstream from the head of tide). The criteria require the protection of only those portions of the streams and their watersheds which are located within the Critical Area. However, local jurisdictions are encouraged to extend the protection measures to all portions of these watersheds.

PROGRAM IMPLEMENTATION

The criteria contain two general categories of protection measures. One addresses activities occurring within streams, the other is concerned with disturbances on the land in the watersheds of such streams.

Stream Protection - The criteria propose four protection measures for stream and streambank habitats:

- 1) Prohibit the introduction or installation of concrete, riprap or other artificial surfaces onto the bottom of anadromous fish spawning streams. This requirement is intended to prevent the artificial alteration of stream bottoms so that natural conditions are maintained for fish passage to and from the spawning areas. It does not prevent the installation of devices or measures to control streambank erosion.
- 2) Prohibit channelization or other physical alterations which change the course, circulation, velocity and other characteristics of a stream if such an alteration would adversely affect the movement of anadromous fish.
- 3) Prohibit the construction or placement of dams or other structures that would interfere with fish movement. A similar requirement is contained in existing State law, but it applies only to streams draining watersheds of 400 acres or more. The criteria require this protection measure on all anadromous fish spawning streams in the Critical Area regardless of the size of their drainage areas.
- 4) Prohibit construction or repair activities from occurring within streams, or within the Buffer along such streams, between March 1 and May 15. This requirement is also similar to that of existing State Regulations except that the March 1st date is two weeks earlier than that provided for in COMAR 08.05.03.09B(4). It is expected that the latter soon will be revised to match the Critical Area criteria.

Local jurisdictions should, by regulation or other appropriate means, provide for the adoption of these stream protection measures.

Watershed Protection - In this section, local jurisdictions are required to develop policies and programs to minimize disturbances in the watersheds which drain into these streams. These policies and programs are to address the following:

- 1) Minimize development activities or other land disturbances;
- 2) Maintain or improve stream water quality;
- 3) Minimize the discharge of sediment to the stream; and
- 4) Maintain or increase the vegetative cover of the watershed.

The overall goal of these requirements is to promote a relatively undisturbed condition in these watersheds by limiting the extent of new development and maintaining as much natural vegetation as possible. The criteria do not contain explicit directions to local jurisdictions for developing appropriate policies and programs, but it is the Commission's intent that these watersheds should be targeted for special protection from disturbance and that any development which is proposed would be undertaken in a manner which is especially sensitive to potential individual and cumulative adverse effects on the stream's water quality. The policies and programs necessary to meet these objectives are required to be shown in the local jurisdiction's Critical Area Program as part of the Habitat Protection Area Plan. Also required is the mapping or other designation of the watershed areas of the streams within the Critical Area.

APPENDIX A

SUMMARY OF REQUIREMENTS FOR
LOCAL CRITICAL AREA PROGRAMS¹

CHAPTER

PROGRAM REQUIREMENT

2 (DEVELOPMENT)

- * Map lands in Intensely Developed, Limited Development or Resource Conservation Areas; determine acreage in each category as of December 1, 1985; develop a method for keeping an account of changes in these categories.
 - * Determine acreage of such lands which are tidal wetlands or in federal ownership.
 - * Show location of any Habitat Protection Areas on such maps.
 - * Establish policies for directing new intense development away from the Critical Area.
 - * Provide by regulation, or other appropriate means, for the limitations required for new and expanded solid waste collection or disposal facilities or sanitary landfills.
- Intensely Developed Areas
- * Identify any existing stormwater management problems and adopt corrective measures.
 - * Identify any existing water quality problems caused by existing development and develop strategies for reducing these impacts.
 - * Develop a means for determining water quality conditions at sites proposed for new development or redevelopment.
 - * Require, by regulation or other means, that new development or redevelopment will reduce pollutant loadings by at least 10% below pre-development levels.
 - * Require that future development will use cluster development practices to the extent practicable.

¹This is a checklist only; the criteria themselves should be referred to for program development purposes.

- * Provide that tree cutting associated with development is minimized and that forest resources of the site are enhanced.
- * Provide for the siting requirements for new ports and industries using water for transportation; request exemption from the Buffer requirements where applicable.
- * Provide by regulation or other appropriate means that permeable areas shall be established in vegetation, where practicable.
- * Establish programs to maintain and enhance public access to the shoreline.
- * Establish biological resource enhancement programs.
- * Provide that any new development proposed shall observe the requirements for identifying and protecting the following environmental or natural features:

Limited Development Areas

1. Habitat Protection Areas
2. Streams
3. Wildlife corridors
4. Forests and developed woodlands
5. Steep slopes
6. Soils with development constraints

- * Adopt other measures to address: limits or impervious surfaces; modifications to existing road standards; clustering of future development; and requiring observance of existing State laws and regulations governing sediment control and stormwater management.

Resource Conservation Areas

- * Provide that new industrial or commercial facilities are not to be allowed in RCA's.
- * Adopt regulations or programs which ensure that new development does not exceed a density of one dwelling unit per 20 acres.

- * Consider and use various measure for maintaining lands in agriculture and forested uses.
- * Require that new development shall conform to the standards set forth in the LDA.
- * Develop programs to: 1) require land management practices consistent with the requirements of Chapters 5, 6, and 9 of the criteria; 2) promote the use of agricultural and conservation easements; 3) promote the continuation of forestry, agriculture and natural habitat; and 4) ensure that the overall acreage of forests and woodlands does not decrease.

Expansion of Development

- * If no expansion of development is planned, no action is required.
- * If expansion is to be proposed, the following information is required to be included:
 - 1) Show how the areas designated conform to the locational criteria for such expansion;
 - 2) Show how the proposed expansion was developed in coordination with, and meets the growth needs of, municipalities.
 - 3) Show how such expansion affects the jurisdictions total Critical Area growth allocation.
- * If expansion of existing IDA's or LDA's into the RCA is to be proposed (see discussion on pp. 9-10) the jurisdiction is to show why such expansion cannot be sited according to the locational requirements in the criteria.

Grandfathering

- * If a jurisdiction wishes to include provisions for intrafamily transfers of land in the Resource Conservation Area, it must submit to the Commission the following:
 - 1) Conditions of approval for such transfers (see pp. 21-22);
 - 2) Standards and procedures by which the jurisdiction will permit subsequent conveyance of lots to persons other than immediate family members, and
 - 3) Provsions for limiting the transfers to those Special Conditions listed on p. 22.
- * Establish, by appropriate means, the grandfathering provisions of the criteria.
- * Determine the effects of any grandfathered or developing parcels on the jurisdictions growth allocation.

3. (WATER-DEPENDENT FACILITIES)
- * Develop planning process for locating water-dependent facilities.
 - * Provide by regulation or other appropriate means that water-dependent facilities will be permitted in the Buffer.
 - * Provide by regulation or other appropriate means for the requirements governing each type of water-dependent facility described in Regulations .06 - .10.
 - * Request Buffer exemption, if applicable.
 - * Identify areas suitable for aquaculture.
4. (SHORE EROSION PROTECTION)
- * Map shoreline areas according to erosion rates.
 - * Adopt policies for achieving shore erosion control objectives.
5. (FOREST AND WOODLAND PROTECTION)
- * Prepare Forest Preservation Plan
 1. Map or designate forests and developed woodlands
 2. Communicate requirements for Forest Management and Sediment Control Plans to landowners
 3. Develop incentives for converting other land uses to forests.
 - * Designate a local agency with which Forest Management Plans will be filed.
6. (AGRICULTURE)
- * Prepare Agriculture Protection Plan
 1. Identify and map agricultural lands.
 2. Communicate to agricultural land owners the requirements of the criteria.
 3. Identify any Habitat Protection Area on agricultural lands.
 4. Adopt programs to: Incorporate agricultural components of the State 208 Plan; protect agricultural lands; protect Habitat Protection Areas; require Forest Management Plans for timber harvests on farms.

- * Direct agricultural land owners to have prepared Soil Conservation and Water Quality Plans.
- * Establish by regulation or other appropriate means, the requirements relating to:
 1. Alterations to non-tidal wetlands.
 2. Clearing of agricultural lands on erodible soils and steep slopes.
 3. Preparation of Soil Conservation and Water Quality Plans.
 4. Clearing of land in the Buffer.

7. (SURFACE MINING)

- * Notify existing mining operations of the Buffer requirements.
- * Identify and map lands with known mineral resources.
- * Adopt limitations on future mining operations.
- * Consider protecting mineral resource sites with future extraction potential.
- * Propose post-excavation land use of mineral resource sites.
- * Provide by regulation or other appropriate means that mining of a site shall be completed within 25 years.

8. (NATURAL PARKS)

- * Identify areas where Natural Parks could be established.
- * Consider conserving the geological and biological resources of such areas.

9. (HABITAT PROTECTION AREAS)

Buffer

- * Prepare Habitat Protection Area Plan.
- * Designate Buffer on appropriate instruments, (i.e., tax maps)
- * Develop Buffer Management Guidelines.
- * Establish by regulation or other appropriate means, the Buffer requirements.
- * Request Buffer exemption, where appropriate.

Non-Tidal Wetlands

- * Identify non-tidal wetlands as described in the criteria.
- * Establish by regulation or other appropriate means, the 25-foot buffer around non-tidal wetlands.
- * Establish means to protect the watersheds of such wetlands when new development activities or other land disturbances are proposed.
- * Establish means for requiring, reviewing, and implementing mitigation plans.

Threatened and
Endangered Species
and Species in Need
Of Conservation

- * Map the habitats of these species.
- * Specify protection programs and specific measures for such habitats - or - describe a process for protecting such areas at the time an activity is proposed which could disturb the habitats.

Plant and Wildlife
Habitat

- * Identify and map or otherwise designate, the areas described in the criteria.
- * Specify protection programs and specific measures for such areas - or - describe a process whereby protection can be provided at the time an activity is proposed which could disturb these habitats.

Anadromous Fish Spawning
Streams

- * Identify such streams and their watersheds in the Critical Area.
- * Provide by regulation or other appropriate means, for the stream protection measures required.
- * Adopt policies and programs to minimize disturbance in the watersheds of such streams.

(written comments by Charlie)

JUDGE LISS

I will forward comments that I receive by Monday, April 28, 1986.

A PROPOSAL TO ASSIST THE IMPLEMENTATION OF THE CHESAPEAKE
BAY CRITICAL AREA PROTECTION PROGRAM

DRAFT APRIL 24, 1986

INTRODUCTION

The Chesapeake Bay is a wealth of early American history, a playground for the millions inhabiting its shores and the continent's richest fish and shellfish hatchery. This marine ecology support system is also threatened by the pressures of an ever-increasing population's demand for industry, food, housing and recreation. As remote as it may be from Quebec's Gaspé Peninsula or Japan, Chesapeake Bay's estuary is directly linked to a Canadian fisherman's catch or a source of eels for Tokyo's finest restaurants.

Masked by the Bay's spectacular beauty however, is the fact that its water quality is deteriorating slowly and quietly. It is not major catastrophes that are polluting its waters. No super tankers have collided and spilled their cargo such as occurred with the tragic oil spill off the coast of France several years ago. The causes are more subtle and, therefore, more difficult to control. For a while it seemed the public was growing accustomed to the Bay's gradual deterioration. Poor oyster harvests were blamed on changes in salinity or overfishing but rarely on causes attributable to human activities on the shoreline.

Gradually, however, marine scientists, watermen and government leaders began to turn public apathy into action by reporting damages the Bay has already suffered and recommending bold and expensive programs designed to save its fragile ecosystem. Now, there is hope that parts of its shoreline -untouched since the Revolutionary War- can remain unspoiled, water quality and fishing can improve and future generations will enjoy this precious resource as their early ancestors did.

From this campaign to save the Bay will come a valuable new science of "estuary reclamation" which can be applied elsewhere in the world. Global security and food security are synonymous. The success of the Chesapeake Bay cleanup may encourage other nations to take similar action and restore their own fisheries and marine sanctuaries. Maryland has started down that path with a determination to

learn from the mistakes of the past as it applies the scientific knowledge of today.

In 1984, the Maryland legislature enacted the Chesapeake Bay Critical Area Protection Program as the centerpiece of its comprehensive approach to preserving and protecting the Bay's unique and fragile environment. This ambitious resource protection program will be developed by the State's Chesapeake Bay Critical Area Commission although primary responsibility for its implementation rests with local governments. Counties and municipalities will be required to propose Local Critical Area plans designed to achieve the three protective goals of the recent law;

- (1) Minimize adverse impacts on water quality that result from pollutants discharged from industry, land development and unsound agricultural practices;
- (2) Conserve fish, wildlife, and plant habitat, and;
- (3) Establish land-use policies for development in the Chesapeake Bay Critical Area which accommodate growth and also address the fact that, even if pollution is controlled, the number, movement, and activities of persons in that area can create adverse environmental impacts.

In accordance with those goals, the Commission established criteria for Local Program development to govern future land use within a thousand feet of the shoreline. Three categories of land are established within the "critical area" as a basis for regulating new development. Under this system, future development will be directed primarily towards the existing Intensely Developed Areas. Moderate growth will be allowed in the Limited Development Areas, subject to strict requirements to assure environmental protection. Although some development may occur in the Resource Conservation Areas, ~~they are intended for fish,~~ wildlife, and plant habitat and activities directly related to forestry, ~~fisheries~~ and resource conservation.

fisheries

The Critical Areas law specifies deadlines for the Commission to approve, deny or modify proposed local Critical Area Programs submitted by Baltimore City, the 44 municipalities and 16 counties surrounding the Bay. Each step of this unique process will require new and challenging approaches to land use and a high level of cooperation between State and local officials. The Law is designed to

their primary management goal is for the conservation of

foster a "bottom up" hierarchy of management in which the land owners and local governments are responsible for its implementation.

PROPOSAL

The Environmental Program of the University of Maryland School of Law was established in 1986. It is an interdisciplinary education, research and service program providing practical work experiences for students and both technical and legal assistance for Maryland's State and local governments and citizens. Its primary focus is the protection of the Chesapeake Bay's (ecology)
ecosystem

This proposal seeks to promote those objectives in several ways. It offers six Projects designed to provide research, evaluation, education and non-litigation services to assist citizens and local governments to implement the Critical Areas Law (Law). Each project will involve students and faculty, county and municipal officials, public and private interests working together to assure the new Law achieves its important goals.

I. Research and Evaluation

Implementation of the Law will pose basic legal and policy choices for all levels of Maryland government. As each decision is approached, it will be necessary to evaluate the options and their impacts upon affected communities, individuals, industries and the Law itself. A "trial and error" approach could waste valuable time and create confusion in the early stages of its development. By analyzing processes by which decisions are made and recommending model procedures and ordinances proven successful elsewhere in Maryland and the nation, State and local government's tasks can be streamlined and simplified.

The following are projects selected after discussion with the Critical Areas Commission technical staff, land-planning experts and University faculty. They address both potential problems and innovative methods of expediting compliance with the Law.

? local jurisdictions affected by the Law?

Project 1. Survey and analyze administrative procedures to simplify compliance with local Program development requirements.

Good faith compliance with the Law may depend more upon economic incentives than on the use of coercive penalties. Tax benefits and similar financial incentives may encourage landowners to negotiate property right transactions with State and private organizations. This can minimize financial impacts for property owners while achieving the goals of the Law.

The designation of "wildlife corridors" between development sites and creation of agricultural land banks in farming and forested areas are also essential parts of the Criteria. These incentives can also help public and private groups, homeowner associations, nature trusts and Maryland programs to protect valuable resource conservation areas. For this reason, the Commission's regulations include important recommendations encouraging local jurisdictions to establish them.

The Maryland State Agricultural Easement Program, Maryland Environmental Trust, the Nature Conservancy and the American Farmland Trust are a few of the more than 500 private and public land conservation programs in America. Each uses a distinct approach but all share the common goal of preserving open space and natural environments. Successful implementation of the Law will be hastened by creative and workable procedures for landowners to follow and local governments to execute when approving easements and other land transactions.

The Environmental Program will survey and evaluate the many potential incentives that comply with the Criteria. This research and evaluation can give the Commission and local governments an understanding of how they work, how they can be applied, and procedures tailored for the local jurisdictions using them.

In order to define the tasks of this Project more precisely, one type of compliance mechanism -- the granting of a conservation easement -- is discussed below. However, the several other State and national mechanisms will be reviewed and recommendations developed in the same manner.

Many legal and economic decisions must precede the negotiation of a conservation easement. The options and their impact on future land rights of the owner or heirs may appear complex and intimidating. Those having the financial means will seek legal and investment counsel at their own expense. Others may not be aware of the advantages offered by this type of transaction. It would simplify this method of land protection if a concise and clearly written handbook were available to property owners, local governments and professional counsels.

The handbook will describe an easement and its advantages; the landowner's rights; development restrictions they impose; economic considerations and tax laws that apply; clear definition of legal terms; step-by-step procedures for negotiating deeds of easement; and a list of local, State and federal government agencies available for specific information.

Finally, the Project will ^{specify} (examine) each action carried out between the landowner and government officials during an easement transaction. Recommendations will be proposed to streamline, simplify and consolidate the process. Model ordinances establishing an administrative procedure for negotiating these transaction will also be offered to local governments for consideration and enactment. The intent is to make the process less expensive, risk-free and flexible for local governments and property owners. Then, they will be more inclined to use this effective tool as a primary means of reorganizing land-use policies and complying with the Criteria.

The research effort will include graduate and post-graduate students and faculty members in disciplines of law, economics, planning and government. It will require about eight to ten months to complete. Throughout its progress, the research will be evaluated by faculty and professional counsel, the Maryland Environmental Trust and appropriate State and local officials.

Project 2: Examine "Transfer of Development Rights" (TDR's) as a means to protect undeveloped Critical Areas:

Development rights can be separated from other rights of ownership and may be transferred and purchased. This legal mechanism allows the transfer of rights from areas where development is not desired (sender ^{AREAS}) to more acceptable areas (receiver ^{AREAS}), by actual sale and purchase. These "transfers"

? REVERSE this order of listing?

may allow more economic development in receiver areas and, thus, represent a valuable commodity to be traded and marketed. It is the role of local officials to identify the senders and receivers, record their transactions, and establish a "TDR banking system" from which landowners, developers and local jurisdictions can make deposits and withdrawals.

It is a free-market approach to allocating growth and a recognized and accepted means of encouraging land conservation in many regions of the country. It may be ideally suited to the task of planning development in suitable areas, while maximizing protection of fragile environments and open space.

This Project will research and evaluate successful TDR programs throughout the nation to determine their suitability for use in the Critical Areas Program. Nearby counties in Maryland and Virginia have used this market oriented approach to land use planning for several years. Their procedures have been refined and simplified to accomplish results similar to those envisioned by the Law. These successful programs can be tailored to the needs of the Bay area jurisdictions and their local zoning and property laws.

The project will highlight:

The legal procedures, local government ordinances used and the methods by which they encourage TDR transactions. Case studies of "banking systems" and descriptions of their creation and operation. ~~will be highlighted in the Project.~~ ~~will also be provided.~~

Following the research phase, the Project will publish a comprehensive report for State and local officials, citizens, property owners, and commercial developers. It will be designed as a manual for those interested in testing, perfecting and relying upon this means of encouraging landowners to cooperate with the goals of the Law. With the guidance of recognized TDR experts, the Project will design a model ordinance that establishes an administrative procedure to regulate the negotiation and execution of transfers. This will be offered to county and municipal governments to be incorporated in their local laws.

Passive tense
as written

the project will also provide

Project 3. Analyze enforcement mechanisms of the Law and methods by which they can be implemented:

And land management

The Law's enforcement mechanisms are somewhat unclear and their effectiveness uncertain since both State and local governmental jurisdictions have been given (that) *VARIOUS* responsibility. However, the principles behind them are unambiguous. The legislators intended the goals of the Critical Areas Program to be defined in the Criteria which describe procedures for developing Local Programs to regulate new land uses through approval of development site plans by local governments. This unique hierarchy of management instruments provides guidance for a process which relies upon local governmental decision-makers to implement. Thus, development site plans must conform with the Local Critical Area Program by reflecting the goals of the Law as interpreted by the local official and subject to the Commission's approval.

Violators of the Law can be prosecuted by local authorities, or upon referral, the Attorney General may invoke any existing sanction or remedy available to local officials. And, the Law authorizes the Attorney General, at the request of the Commission, to seek injunctions to enforce compliance. Enforcement powers are critical to the implementation of any law, but the range of enforcement mechanisms in this Law are not clearly stated. Therefore, this multi-jurisdictional approach must be described for, and understood by, the local governments on whom its implementation depends.

Let please comment

The Project will analyze the decision-making and management hierarchies to determine which stages in the enforcement process may need legal procedures to assure compliance. The role of criminal sanctions used in other environmental protection laws will be examined to determine if they are more effective than civil penalties in assuring compliance in a law of this type. It will also examine the various enforcement mechanisms used in other State laws to identify those self-implementing civil remedies that work well and can be adapted to this Law. This will be the focus of the Project since it is unlikely that criminal sanctions will be used in the enforcement of this Law which stresses inter-governmental cooperation.

After the research is completed, the conclusions will be submitted to an advisory group of representatives from the State Attorney General's office, University law and government science faculty and Commission staff for review

and comment. Those enforcement mechanisms which appear to offer local governments useful remedies for non-compliance will be described and made available to municipal and county officials.

Project 4. Develop standards and a procedural protocol to encourage inter-governmental cooperation in land-use decisions.

The provisions of the Law protect the domain of local governments over zoning and land-use decisions. In fact, the Criteria necessarily force land-use decisions to be based upon inter-jurisdictional agreements. However, it is virtually silent on the relationship between counties and municipalities in the course of those decisions. And, it does not set forth specific legal standards or a procedural protocol when land-use disputes arise between units of local government.

The Project will develop a set of standards and a model procedural protocol in conformance with Maryland's Charter form of Government and tailored to address the types of disputes that might actually arise. In that sense, the model procedural protocol will be designed to guide the inter-jurisdictional land-use decisions and reduce needless friction between governmental divisions. The goal is to promote consistent implementation of the Criteria throughout the Critical Areas; particularly in cases where county-level decisions might tend to dominate those of a municipality.

The standards and model protocol will be submitted to an advisory board of representatives from the State Attorney General's Office, faculty from the University Schools of Law, Political Science and Government for their review and comment. The conclusions of the Project will be published and provided to the Commission, the State Attorney General's Office and the local governmental jurisdictions for their consideration and incorporation by counties and municipalities in their statutes.

May also be used - verasa

II. Non-Litigation Dispute Resolution

Project 5: Develop a mediation process to resolve disputes that occur during implementation of the Law.

The Environmental Program will provide a University of Maryland-based interdisciplinary mediation component to assist in resolving disputes when they arise during the development of the Critical Areas Program. The focus will be upon creating a mediation process that allows affected parties to agree to resolving the problem rather than seeking arbitration or litigation. This aim towards conflict resolution among parties will foster harmony throughout the difficult period of implementation when traditional roles of government may be subjected to significant changes imposed by the Law. It is also in keeping with the spirit of the Law's intent to promote its hierarchical approach to program development and implementation.

Mediation has been successfully used by governmental and private sectors many times to settle environmental issues involving licensing and siting of powerplants, highways and municipal services. Throughout the course of the Law's implementation issues may arise that pit traditional and potentially-polarizing advocates on each side of a decision. This mediation Project will be designed to provide an alternative to the customary method of solving disagreements in the courts.

The parties for which the mediation services will be available may be municipalities, counties, the Commission, private parties, one or more of these entities, or all of them. Disagreements about zoning decisions, the components of a submitted Critical Areas Plan or Development Site Plan or any aspect of the Law could be presented to the mediation team.

The team might include University faculty members recognized for their expertise in city planning, biological sciences, economy, land-use law, administration and government, as well as professional mediators and members of the Maryland legal profession. Its goal will be to generate harmonious, fair and efficient implementation of the Law and its Criteria by avoiding protracted and expensive litigation.

III. Education.

Implementation of the Law will require many new and complex tasks, including land-use inventories and future development planning, which local governments must accomplish with limited technical and financial resources. Property owners, real estate developers, farmers and watermen, in the affected areas, must make legal and economic decisions for which they may not be prepared and for reasons they may not fully understand.

The Critical Areas Commission has primary responsibility for providing clear and timely information to citizens, local authorities and the business community regarding every aspect of the Law and its requirements. However, there are valuable additional services that entities such as The Environmental Program can provide.

Project 6: Develop an education program to assist the enforcement of the Critical Areas Law.

The University's Environmental Program and the privately funded Chesapeake Bay Foundation will design and provide educational programs for county and municipal officials, citizens, farmers, watermen, land owners and real estate developers affected by the Law. These seminars will be held during the early stages of the Critical Areas Program's development and in the affected communities. In addition, interested parties requesting briefings or consultation will be accommodated if time and resources permit.

Among the topics these educational sessions will discuss are:

1. The State and local role in land-use planning pursuant to the Critical Areas Law and Maryland law, in general;
2. The financial incentives provided in the Law and other similar methods used to accomplish the protection of environmental resources and open spaces;
3. Administrative and enforcement mechanisms available to State and local officials; and,
4. Other topics relevant to implementation of the Law as requested by representatives of public and private interests within the Critical Areas of the Bay.



HARRY HUGHES
GOVERNOR

STATE OF MARYLAND
EXECUTIVE DEPARTMENT
ANNAPOLIS, MARYLAND 21404

file

WYE GROUP MEETING
MONDAY, APRIL 28, 1986
WYE WOODS CENTER
ASPEN INSTITUTE

AGENDA

- 8:30 - 8:45 a.m. Introduction, Announcements.
- 8:45 - 10:00 a.m. Department of Agriculture.
- 10:00 a.m. - 12:00 p.m. Office of Environmental Programs.
Ray Feldman
- 12:00 - 1:00 p.m. Lunch.
- 1:00 - 3:00 p.m. Department of Natural Resources.
- 3:00 - 3:45 p.m. Department of Education.
- 3:45 - 5:00 p.m. Discussion:
 - Regional Program.
 - Federal Funding and Congressional Appropriations.
 - Conclusions from Day's Session.

- * *public lands funding*
- * *NOAA stock assessment + monitoring for w.g.*
- * *STP - State ordered.*
- * *pivitation concept + proliferation of package plants.*
- * *education - increase in funds.*
- * *p.i. officers - meet on initiatives*

4/28 { *Fed. Tax Ref. Uncert. \$0*
\$ state owned lands monitoring

DNR { *NOAA + Stock assessment*
Serial FMP for all est
State owned STP

7/11/84 { *State transfer of*
privatization
withholding
USDA own. meet.
State owned meet.
Stock assessment
rest data w/ 7/11/84
2/11/85
Industrial Council

CHESAPEAKE BAY INITIATIVES

FISCAL YEAR 1986: THIRD QUARTER PROGRESS REPORT

I. Title

Category D - Protection of Land Resources
Initiative D4- Retention of Existing Forest Land

II. Purpose

This initiative will:

- Define and map the critical land areas currently forested adjacent to the Bay and its tributaries.
- Provide technical assistance to landowners including the preparation of forest management plans.
- Cooperate with local Soil Conservation Districts in developing forested buffers as Best Management Practices for agricultural lands.

III. Budget

A. Operating

Number of Positions	4
Salaries and Wages	\$ 91,238
Operating Expenses	\$ 21,000
Total	\$112,238

B. Capital

None

IV. Fiscal Year 1986 Hiring Schedule

No positions to be filled.

V. First, Second and Third Quarter Activity Summaries

A. First Quarter

1. Wrote seven (7) forest management plans for 759 acres within the Critical Area.
2. Prepared thirteen (13) sediment control plans for logging operations on a total of 1,137 acres.
3. Attended numerous meetings and gave presentations (17) to county, state and federal agencies as well as private organizations and civic groups to explain our program of forest management assistance to counties and private landowners in the Critical Area.

4. Provided technical assistance to four (4) developers and/or builders on 913 acres of forested development sites.
5. Developed a new public relations Bay Initiative brochure entitled, "Trees for a Cleaner Bay." This will help to educate/inform landowners on the importance of forest buffers for improving water quality.

B. Second Quarter

1. Examined woodland properties and prepared fifteen (15) written forest management plans for 947 acres within the Critical Area.
2. Provided timber sale assistance to two landowners on 46 acres.
3. Located and examined a 15-acre site for forest buffer planting during the spring tree planting season.
4. Rendered planning assistance to county planning and zoning departments for woodland subdivision sites reviews.
5. Prepared sediment control plans for five (5) landowners on 182 acres.
6. Exhibited a bay display at the Farm Bureau annual meeting and at both the Patuxent River and Chesapeake Bay Appreciation Days.
7. Conducted a combination boat/field tour about the Bay for the Assistant Secretary of the U. S. Department of Agriculture and U. S. Forest Service officials. Through water quality testing, we assessed the Bay's biological health and learned about the influence of people on the Bay's productivity. We discussed the benefits of forest buffers at reducing sedimentation while at the same time providing habitat for wildlife and contributing to the total wood needs of the state.
8. Continued to attend numerous meetings and provide formal presentations on our Bay program to interested groups.

C. Third Quarter

1. Examined woodland properties and prepared twenty-nine (29) written forest management plans on 2,716 acres within the Critical Area. These plans encompassed 22.6 miles of water-front property.
2. Provided timber sale assistance to nine (9) landowners on 110 acres.
3. Prepared sediment control plans for eight (8) landowners on 469 acres.
4. Developed a new forestry exhibit that displays the importance of sound forest management in helping to restore the Chesapeake Bay.

5. Rendered planning assistance to county planning and zoning departments for woodland subdivision site reviews on 1,746 acres.
6. Implemented the Susquehanna River Basin Forestry Project in Cecil and Harford Counties. Hired two (2) contractual foresters and began a training program for them.

VI. Fourth Quarter Projected Activities

- A. Continue to examine forest land within the Critical Area and prepare written management plans for these properties. Estimate of 15 plans to be accomplished.
- B. Establish additional forest buffers along tributaries through tree planting practices. Estimate of 20 acres to be accomplished.
- C. Provide technical assistance to local governments in developing their Chesapeake Bay Critical Area Management Program.
- D. Begin making plans for the hiring of twelve (12) additional Bay Watershed Foresters approved by the 1986 Maryland General Assembly.
- E. Start a landowner contact program within the Susquehanna River Watershed to encourage afforestation of streamside buffers and low productivity cropland.

FISCAL YEAR 1986

SUMMARY OF ON THE GROUND ACCOMPLISHMENTS FOR THE CHESAPEAKE BAY INITIATIVE
RETENTION OF EXISTING FOREST LAND PROGRAM

ACTIVITY	FIRST QUARTER	SECOND QUARTER	ACCUMULATIVE FIRST AND SECOND QUARTER	THIRD QUARTER	ACCUMULATIVE FIRST, SECOND THIRD QUARTER	FOURTH QUARTER	TOTAL FISCAL YEAR
Forest Management Plans							
Number	7	15	22	29	51		
Acres	759	947	1,706	2,716	4,422		
Sediment Control Plans							
Number	13	5	18	8	26		
Acres	1,137	182	1,319	469	1,788		
Planting Site Examination							
Number	3	2	5	6	11		
Acres	7	25	32	43	75		
Trees Planted							
Acres				10	10		
Buffer Lineal Feet				1,000	1,000		
Hydrological Stand Improvement							
Acres							
Timber Sale Assistance							
Number	2	2	2	9	11		
Acres	46	46	46	110	156		
Reviewed Developments							
Number	4	18	22	21	43		
Acres	913	1,011	1,924	881	2,805		

DNK - MET
4/25/86

CHESAPEAKE BAY INITIATIVE D3
CONSERVATION EASEMENT PROGRAM
Progress Summary
July 1, 1984 - April 30, 1986

I. Progress to Date

- Developed cooperative outreach arrangements with CBF and Chester-Sassafrass Foundation. Co-sponsored a land preservation conference.
- Initiated land preservation newsletter, LAND MARKS.
- Undertook outreach/solicitation in selected areas of Talbot, Queen Anne's, Caroline and Harford counties.
- Worked for passage of property tax credit bill (credit incentive for easement donations). Bill passed 86 General Assembly.
- Negotiated and accepted easements on Bay area properties totaling 2,466 acres,* including 8.1 miles of Bay and tributary shoreline. Easements included a 300 acre recorded (undeveloped) residential subdivision and several public access waterfront properties in a municipality.
- Negotiated protective vegetative buffers along 8 miles of waterfront.
- Reduced average permissible residential density on easement properties from 1 dwelling unit/5 acres** to 1 dwelling unit/55 acres. Trust maintained location approval over most new residences permitted.

II. Problems and Recommended Solutions

- IRS Audits - IRS is aggressively challenging dollar value of conservation easement donations nationwide. Effect is to dampen landowner interest in charitable easement giving. Solutions: 1) Continue working with Land Trust Exchange and other national organizations to enlighten the Service; 2) await results of pending federal tax court cases; 3) compile information on sale of easement restricted properties to develop comparables; 4) assess and report on IRS activity re: MET easement donors.

III. Issues on the Horizon and Policy Options

- Land management practices - consider incentives to encourage preparation and implementation on easement properties of

appropriate on-site management practices re: agriculture, forestry, wildlife, etc. Policy options include information/referral, technical assistance, financial support.

-
- * Of this amount, 1,100 acres are attributable to Bay initiative easement planners.
 - ** 1 D.U./5 acre is an overall average derived from zoning densities affecting easement acreage outside of the critical area, combined with the application of the 1/20 ratio on easement acreage inside the critical area - allowing for greater densities than 1/20 on specific tracts which qualify for grandfathering (e.g. recorded subdivisions).

A-5 Upgrade State-owned Sewage Treatment Plants

I. Progress to Date

- * Have developed a 5 year Capital Improvement schedule geared towards achieving NPDES compliance by July 1988, as well as bringing nutrient removal facilities on line and promoting land treatment wherever feasible.
- * Dorsey Run Advanced Wastewater Treatment Plant funded and under construction will achieve removal of phosphorus and nitrogen.
Cost - \$13,000,000
- * Bowie State College - Discharge issue resolved, now prepared to enter construction phase.
- * Montrose School - Cut from FY 1986 budget by legislature.

II. Problems & Recommended Solutions

- * Availability of adequate funds to maintain schedule, a real problem.
- * Priorities need to be adhered to in order to meet Bay Initiatives and Federal deadlines.
- * Lack of major maintenance account for State facilities is negatively affecting performance and life of plants.

- Create a revolving annual maintenance fund to allow proper priority setting and scheduling of maintenance tasks.

III. Issues on the Horizon and Policy Options

- * Awareness and ability to fund increased operating expenses as a direct result of upgrading treatment processes and sludge handling requirements. This is a State issue, as well as one facing all wastewater treatment plant operators.

operators.

A-6 Use of Suitable State Lands for Sludge, Sludge Compost and Sewage Effluent.

I. Progress to Date

- * Have developed sludge management plans for all State facilities, maximizing use of State-owned lands, primarily correction facility and Forest, Parks and Wildlife lands.
- * Have conducted two small-scale sludge composting projects on the Eastern Shore, demonstrating cost effectiveness of process, as well as benefits accruing to usefulness of product .
- * Several State Parks are using land treatment, or compost as part of regular land maintenance program, as well as forestry programs.

II. Problems and Recommended Solutions

- * Lack of understanding on part of the public creates permitting problems. Statewide educational effort to intelligently discuss sludge management support from all State agencies.
- * Increased costs to sludge management are adding to increasing operating costs being experienced by local units of government.
 - Need to openly pursue regional and innovative approaches to resolving issues.

III. Issues on the Horizon and Policy Options

- * Greater amounts of sludge are being produced daily, thus greater and more innovative methods of sludge disposal or management are required. The State's research and regulatory functions should do all it can to encourage this activity.

B-5 Best Management Practices for Existing Urban Areas

I. Progress to Date

- * Advisory group has reviewed approximately 200 potential projects.
- * The following projects have been approved by the Committee and are in some stage of planning in design.

- Elm Road/International Hotel Project

Retro-fit of a culvert which will provide an extended detention pond releasing stormwater flows over a 13 hour period. (Settling of sediments and pollutants)

- Oil/Water Separators at Fuel Farm

Construct new separator and retro-fit 3 existing separators to remove oil, grit, and sediments from stormwater flow.

- Poplar Avenue Parking Lot

Retro-fit an existing detention pad, creating a shallow marsh habitat.

- Daily Parking Lot

Retro-fit two existing inlets with oil/grit separators.

- State Police Barracks

Will eliminate drainage problem by introducing infiltration techniques.

no additional funds. will spend next year in assessing implications

- Towson State University

Vegetative protection of stream banks currently being eroded by stormwater.

II. Problems & Recommended Solutions

- * This program will be out of money with completion of above-stated projects.
- * Evaluation program needs to be designed to judge effectiveness of these actions.

III. Issues on the Horizon and Policy Options

None at present.

Initiative B1 State Agricultural Soil and Water Conservation Program

I. Progress to Date

Need copies of:

- * copy of sample Mod w/ districts
- * study on priority watersheds
- * update on a chart listing staffing at each SCD.

- Priority Watersheds Established
- Soil Conservation Districts Staffed
- Information Programs Expanded
- Farm Plans Developed and BMPs Installed
- Cost-Share Grants Approved and Projects Completed
- Demonstration Sites Developed
- Research Initiated
- 208 Ag Water Quality Plan Update Drafted

Have mou's w/ 24 of the SCDs. nitrogen & phosphorus. [potential or greatest risk] top 24 in 1st 2 1/2 yrs. SCDs implem. - remaining rather constant

Currently
1) training level
2) add 60 plans per year.

3200 approved
* Have re-arranged targeted n.e. & bank money for BMPs.

* Implemented an info & educ. program thru the Districts focus on nutrient management

* Draft 208 Plan - SSSC then SCD

II. Problems and Recommended Solutions

- Conflicting Priorities: Priority Watersheds vs. Critical Area
- Agricultural Efforts vs. Urban Workload of Districts
- Cost-Share Funding
- Publicly-Owned Land Cost-Share Regulations

— priority over private sector.

III. Issues on the Horizon and Policy Options

- Funding
- Federal Support

Initiative B7

Agricultural Drainage *Water mgt.*

I. Progress to Date

- Ag Drainage Project Regulations prepared for adoption
- Inventory of Public Drainage Associations Completed
- Site reviews of drainage projects initiated
- Support provided to Soil Conservation Districts to initiate activity needed to implement Regulations
- Cost-Share Funds granted for maintenance of Ag Drainage Projects

- next issue of Md. Reg. - half are active 1000 miles of channel. Caroline I.E.S. Charles

II. Problems and Recommended Solutions

- Consistency among Regulations
- Interagency Cooperation and Sharing of Information

III. Issues on the Horizon and Policy Options

CHESAPEAKE BAY INITIATIVE B-6

NON-STRUCTURAL SHORE EROSION CONTROL

I. Progress to Date

- Demonstration Projects on state-owned lands have been undertaken in six coastal counties: Somerset, Dorchester, Queen Anne's, St. Mary's, Calvert, and Charles.
- 26 private shorefront property owners, (approximately 9,000 linear feet of shoreline) have received matching grants from NSSEC fund in FY '86.
- \$1,675,000 has been pledged by US EPA for Demonstration NSSEC Projects, and for cost-shared projects on private property in EPA-targeted watersheds: Chester, Miles, Wye, and Choptank Rivers.
- \$280,000 has been pledged by Baltimore District, US Army Corps of Engineers, for Demonstration NSSEC Projects using innovative techniques with offshore breakwaters, and "hydroseeding" of Bay bluffs.

II. Problems and Recommended Solutions

- \$250,000 Annual General Fund appropriation not sufficient for level of interest expressed by shorefront property owners, particularly since Queen Anne's, St. Mary's and other counties are beginning to tie building occupancy permits for shorefront homes to implementation of shoreline stabilization procedures by new property owners. Recommended solution: Enhancement requests for additional funds, and targeting of Federal funds to additional watersheds.
- Complaints from landscapers who pioneered the NSSEC techniques that program is wasteful. Recommended solution: one-two year grace period to operate the NSSEC program, in order to evaluate operating procedures, solicit reaction from owners of benefited properties and suggest improvements to General Assembly.

III. Issues on the horizon and policy options

- Flat rates (similar to Ag cost-shared projects) will be feasible in one-two years with cost data derived from existing projects. Recommended policy option: adopt flat rates as basis for offering property owners matching grants.
- Outlook for coordination of NSSEC program with state dredging projects is poor, until: (i) standards for off-site impacts are permissible by regulatory agencies, and (ii) feasible designs can be implemented. Recommended policy option: Undertaken Demonstration Projects using dredge spoil in Waterway Improvement Program, to develop techniques for installation, determine suitable standards for future designs, and collect environmental data for analysis of off-site impact.

CHESAPEAKE BAY INITIATIVE C-1

SUBMERGED AQUATIC VEGETATION

I. Progress to Date

- Harford Community College undertook transplanting efforts in 12 locations in the Susquehanna flats region. Most of the plant material utilized was from Wisconsin. High success rate. Five total acres.
- Harford Community College - Wild Celery plants were moved from Log Ponds to Garrett Island as mitigation for the destruction of valuable SAV habitat. This was funded by developers and the state. High success rate.
- University of Maryland conducted transplanting efforts in six areas along the Choptank River and established four nursery ponds for current and future revegetation efforts. Some sites selected were also utilized during the EPA Bay Study. Two total acres. Partially successful.
- Produced and distributed a policy document entitled "Future Direction of the Submerged Aquatic Vegetation Program" to the SAV Technical Committee and other experts in the field. This document attempts to provide a consensus of opinion on how the State should implement this program. Comments have been received and are being incorporated.
- Negotiations with United States Army Corps of Engineers (USACOE) on the management of Hydrilla in the Potomac River continued and an agreement may be reached as early as May.
- Met with potential contractors interested in funding through the SAV Initiative. Proposals were received and the following projects will be funded. 1) Transplanting efforts at the University of Maryland and Harford Community College; 2) Sediment seed stock assessment of most major tributaries by John Hopkins University; and 3) Analysis and recommendations for plant propagation of native submerged plants by Anne Arundel Community College.
- The entire Chesapeake Bay was ground-truthed for SAV's in 1985 by the Maryland Charter Boat Captains, the Citizens Program for the Chesapeake Bay and the Chesapeake Bay Foundation.
- Met with representatives from EPA/EPIC, VIMS, Citizens Program for the Chesapeake Bay, the Chesapeake Bay Foundation, USGS, EPA Chesapeake Bay Program, USFWS and DNR to establish a ground-truthing effort for the 1986 overflight. The EPA Chesapeake Bay Program, USFWS, VIMS and Maryland DNR will fund this years overflight effort.
- Legislation designed to require the submittal of a plan before harvesting SAV's, with certain exemptions, was approved in March.

II. Problems and Recommended Solutions

None.

III. Issues on the Horizon and Policy Options

Issue ● Cooperative Agreement between the USACOE and the State of Maryland on the Management of Hydrilla in the Potomac River.

Policy Options ● Participate or not participate in the Cooperative Agreement.

Issue ● Should mitigation be allowed for projects which adversely impact SAV beds?

Policy Options ● An analysis of policy options should be undertaken.

Chesapeake Bay Initiatives

C-2 Oysters

I. Progress to Date

- The oyster hatchery at Deal Island has been constructed and is preparing for its first full season of operation.

- Dredged shell plantings have been increased to 300,000 cubic yards during the 1985 season and will be increased to 350,000 cubic yards during the 1986 planting season.

- The position as Manager of the Deal Island Oyster Hatchery has been filled by Leon Williams.

- Preliminary meetings have been held with the University of Maryland scientists to develop a research project to study the effect of chemical treatment on oyster shells as an aid to oyster recruitment.

- Sanctuaries for oysters are being established during this year. Three sanctuaries will be planted with oyster seed and eyed larvae. Three of the sanctuaries will be planted with shells.

II. Problems and Recommended Solutions

- Obtaining an adequate supply of fresh oyster shells. Recommended Solution -- Enabling legislation that will allow the Department to obtain the available shells.

- Continuing the dredging of oyster shells in the upper Bay. Recommended Solution -- Obtain the necessary permits for the operation and secure long range general funds to pay for this operation.

III. Issues on the Horizon and Policy Options

- Using oyster seed on sanctuaries -- Policy Option is to utilize as much hatchery seed and eyed larvae as possible and to work with watermen to show them that sanctuaries will be beneficial to their oyster industry.

- Funding of hatcheries -- Policy Options are that we find an alternate funding source to avoid using severance taxes. The watermen are very much opposed to using any tax money for any operation other than moving of oyster seed and planting of oyster shell.

- The availability of adequate dredge shells for cultch -- Policy Option is to find alternate cultch materials in an adequate and inexpensive supply, possibly surf clam shells and ocean quahog shells may be the answer to this issue.

I. Progress to Date

- The Emergency Striped Bass Planning and Coordinating Committee was formed to contribute to the preparation of a hatchery feasibility study.
- Department staff evaluated several state owned properties including a detailed analysis of the possibility of using the Chesapeake Bay Model at Matapeake for the striped bass hatchery. Engineering and design layouts from South Carolina facilities have been acquired and several sources of information on operating costs were collected. Departmental representatives visited South Carolina hatcheries wherein they obtained detailed operating costs, operational procedures, and engineering designs for recently constructed hatchery buildings and fingerling production ponds.
- A project statement has been prepared which brings all the appropriate state agencies, including State Planning, General Services, and Water Resources into the construction process.
- A design program for site selection for locating the intercept hatchery was prepared (project number G-008-841-001). A contract to evaluate potential sites as described by this program was awarded to James R. Holley and Associates, Inc.
- Site evaluations were prepared for nine potential locations for the intercept hatchery.
- Hatchery Site was selected utilizing land located in Tuckahoe State Park.
- Test well contract developed, advertised, bid, awarded and well drilling has begun.
- Two positions were filled, one of these resigned and the third position for hatchery manager was transferred to another program.
- Equipment has been purchased so that the hatchery will be operational as soon as it is constructed.
- We are sending striped bass fry to federal hatchery facilities for grow-out and return for stocking into Maryland tidal waters. This is being accomplished through a cooperative agreement with the Fish and Wildlife Service.
- Striped bass culture techniques are being refined with several significant improvements being made this spring.

II. Problems and Recommended Solutions

- It is becoming increasingly difficult to hire and maintain hatchery personnel under the present salary guidelines. Entry level for new employees is Grade 5 at \$11,567 annually. We had six declines when the job was offered due to salary level and the person that was hired left in two weeks for a higher salary.

It should be possible to start new employees at a higher grade giving consideration to educational level achieved or past work experience.

III. Issues on the Horizon and Policy Options

- Striped bass stocking will be scrutinized to determine if it is meeting the desired objective of revitalizing the wild stocks. This stocking program has other potential benefits and the effort should be kept on track to achieve all objectives. In addition to stocking potential brood stock, the hatchery produced fish are supporting six research projects alone this spring.

Initiative D1 (B)

Chesapeake Bay Shoreline Improvement Loan Fund Program

- Authorizing the creation of a State Debt in the amount of \$2 million, the proceeds to be used to provide State grants to certain local jurisdictions, to assist with certain eligible costs for acquisition, equipping, rehabilitation, and improvement of certain projects designed to enhance the shoreline of the Chesapeake Bay.

I. Progress to Date

- Fifteen exceptional projects were selected from a large list of proposals submitted by local jurisdictions in the Chesapeake Bay critical area.
- These projects were submitted to and approved by the Board of Public Works in April, 1985.
- Two of the approved projects have been completed:
 - City of Havre de Grace - Jean S. Roberts Memorial Park
 - City of Leonardtown - Smith Creek Salt Marsh Creation and Wetland Wildlife Habitat Development.
- One of the projects, Jean S. Roberts Memorial Park, has been approved for interim funding through the Capital Improvements Retainage Fund.

II. Problems and Recommended Solutions

- Two local jurisdictions, the City of Leonardtown and the City of North Beach, have requested reimbursement for which there is no present funding mechanism. Additional reimbursement requests are anticipated in the near future.
- Other local jurisdictions are progressing slowly with their SLIP projects until the funding situation is clarified.

A request has been made for inclusion of bonds supporting this program at the next bond sale (July 1986).

III. Issues on the Horizon and Policy Options

- Without a reliable source of reimbursement funds, many local jurisdictions are hesitant to incur the debt of these shoreline enhancement projects.

The overdue issuance of bonds supporting this program must be a priority.

- Funding must be pursued to finance the SLIP projects in the succeeding years.

CHESAPEAKE BAY INITIATIVE D-2

NON-TIDAL WETLANDS INITIATIVES REPORT

I. Progress to Date

- Planned, prepared materials handouts and conducted four wetland identification and classification workshops for local, state and federal government agency staff, consultants and other interested individuals.
- Implemented first phase of resource assessment and monitoring system (digitized National Wetland Inventory maps for all wetlands on the western shore).
- Completed and published a complete listing of all vascular plant species occurring in Maryland wetlands.
- Organized and conducted major conference on protecting wetlands of the Chesapeake.
- Prepared curriculum and handouts for Hydric Soils II training session for local governments and consultants.
- Prepared curriculum and handouts for Wetland Identification and Classification Workshop.
- Reviewed and commented on ten assorted projects affecting or potentially affecting non-tidal wetlands. Field visits were conducted at each site.
- Thematic Mapper data for 1982 has been acquired and is currently being run on the Salisbury State College VAX computer for Severn Run, Jug Bay, Choptank River, and Eastern Baltimore County Landsat/National Wetland Inventory Data base demonstration areas.

II. Problems and Recommended Solutions

- The non-tidal wetland data base will ultimately require more sophisticated equipment which incorporates Geographic Information System Capabilities.

III. Issues on the Horizon and Policy Options

- Non-tidal wetland areas are still not afforded enough protection. State legislation should be introduced in one or two years.

CHESAPEAKE BAY INITIATIVE E-1

RECREATIONAL FISHING - INCREASE SPORTFISH HABITAT AND RECREATIONAL FISHING OPPORTUNITIES

I. Progress to Date: July 1, 1984 to March 31, 1986

Fish Reefs and Piers

- A reef development plan for Chesapeake Bay has been presented.
- Habitat reef at Tolchester initiated August 1985.
- Site selection, requisitions, and contracts completed for construction of six reefs in Chesapeake Bay and tributaries.
- Contract completed for urban fishing pier in Baltimore, site design completed and estimates being prepared for pier at Point Lookout State Park.
- Plans developed for conversion of Rt. 50 Choptank River Bridge to fishing piers.

Monitoring and Research

- Gwynns Falls-Middle Branch Project underway to modify practices of watershed residents to reduce pollution; restore fish habitat, and access for residents.
- Yellow Perch pilot restoration effort in Gwynns Falls in progress, first year evaluation in fall 1986.
- Assessment of Yellow Perch population and survival status in major spawning tributaries; neutralizing streams to negate effects of low pH.
- Adult striped bass winter stock assessment funding.
- Bioassay conducted for survival of early life stages of striped bass in Choptank River in 1985 and 1986 to determine effects of pH in spawning area.
- Striped bass hatchery production at Elkton funded for 1985.
- Completed Maryland Sportfishing Survey to estimate participation and catch.
- DNR/Sea Grant study of the economic impact of the striped bass moratorium and fishermen attitude to the Chesapeake Bay Sport Fishing License.
- Contracts completed for projects to determine benefits of SAV's and marsh habitat for sportfish, and monitoring of fish disease in hatcheries.

II. Problems and Recommended Solutions

- Contract and requisition expedience. This problem due to acceleration of program.

III. Issues on the Horizon and Policy Options

- Potential of user group conflicts in the vicinity of piers and reefs, policy will have to be developed related to future reef placement.

CHESAPEAKE BAY INITIATIVE E-3

MARYLAND CONSERVATION CORPS

I. Progress to Date: July 1, 1984 through March 31, 1986

- Designed and implemented program structure of crews, crew chiefs, and field coordinators, and coordinated same with county and regional government.
- 1400 disadvantaged youth between the ages of 14 and 21 have worked through the 2 eight week summer sessions.
- 96 Award of Excellence youth selected by the county school systems have participated in the program.
- A twelve hour "Job Readiness" component including environmental career investigation has been taught to all participants.
- A twelve hour Chesapeake Bay environmental education was directed to all participants.
- Projects were completed at 116 worksites throughout the State.
- Approximately 58 miles of waterways were cleared of man-made and natural debris.
- Controlled erosion with structural and vegetative methods on shoreline areas totalling approximately two miles.
- Restored six striped bass rearing ponds.
- Cleared debris and overgrowth from approximately 170 miles of shoreline access trails.

II. Problems and Recommended Solutions

- Payroll: Solution - Turn in State seasonal contracts at least 4 weeks prior to program start.
- Transportation: Solution - Reserve and contract vehicle rentals in November, prior to the start of the program.

III. Issues on the Horizon and Policy Options

- Declining unemployment means reduced federal funds available. Increase Award of Excellence projects within the Corps.
- Equity of projects among counties. Develop larger regional projects and identify benefits to the region and State as a whole.

Chesapeake Bay Initiative E-4
Fisheries Management Plans

I. Progress April 1984 - April 1986

- Development of demographic surveys of striped bass and American eel watermen
- Development of completed American and Hickory shad fisheries management plan (FMP), in conjunction with Martin Marietta Corp. The FMP briefing document is currently in review.
- Development of blueback and alewife river herring FMP, in draft form.
- Development of American eel FMP, in draft form.

II. Problems and Recommended Solutions

- Implementation schedule: 18 fish species are designated as requiring FMPs prior to end of FY88. However, only 2 FMPs can be accomplished within a fiscal year. Implementation can be accommodated by extending the FMP project until 1994; prioritizing species according to critical need for management and developing plans by priority; and/or by addressing the staffing problem listed below.
- Limited staffing: the project has a staff of two. Of these two, one member is essentially a striped bass stock assessment liaison to the FMP project. Staffing problems can be rectified by a) hiring additional staff members and/or b) contracting FMP work to competitive bidders.
- Lack of stock assessment information: the majority of FMPs are (will be) based on information gleaned from secondary sources. Stock assessment surveys and indice development are required in order to understand ongoing status of the stocks. Licensing of all finfish fishing is required so that harvest information, necessary to substantiate adult and juvenile surveys, will be available.
- Lack of socio-economic demographic information: FMP-designated finfish lack explicit economic and demographic data integral to the planning process. This can be rectified by encouraging and supporting Sea Grant and University projects, as well as by hiring contractual consultants.

III. Future Problems and Policy Options

- Implementation Strategy: presently no FMP (and FMP recommended actions) has been formally recognized. Therefore, a strategy for inner-departmental review and inter-departmental acceptance, as well as for implementation of action items (such as regulations), has not yet been formulated. Explicit policy regarding the focus and authority of a fisheries management plan is necessary for expeditious development and direction of FMPs. It is recommended that Tidewater Administrators, planners, and MDNR officials work jointly to formulate guidelines for plan implementation and presentation to the Maryland state legislature.

CHESAPEAKE BAY INITIATIVE G1

REGIONAL DATA CENTER

I. Progress to Date

- With the partial assistance of Federal funding through NOAA, various hardware and software enhancements and upgrades have been purchased and installed at the Data Center. These include:
 - additional disk drives
 - a large-format color plotter for production of maps and other graphics
 - scientific software
- Statistical multiplexers have been installed at DNR for rapid data communications with the VAX computer.
- Data management staff at DNR have assisted in Chesapeake Bay data identification and retrieval for several other Initiative programs.
- User screening procedures have been implemented.
- Staff have served as the Chesapeake Bay Data Management Subcommittee, and recently initiated the formation of a Planning Task Force to draft a Chesapeake Bay Data Management Plan and to address policy issues in this area.
- A plan has been developed for more efficient transfer of Resource Monitoring data from DNR to the Data Center.

II. Problems and Recommended Solutions

- Updating of historical fisheries data and submissions of habitat monitoring data are behind schedule. Recommended solution: to some extent, scheduled new personnel, equipment, and procedures will help. Better coordination will be needed between fisheries and data management staff, however, to insure that the effort to provide important data to the Center are not fragmented.

III. Issues on the Horizon and Policy Options

- Chesapeake Bay monitoring and research will generate huge amounts of data over the next few years. This will tax the hardware at the Data Center, and the agencies responsible for submitting data on a timely basis. The problems with living resource and habitat data described above are an illustration of the problem. Despite the fact that most of the people involved are aware of this issue, there is a real danger that the rate of data collection will outstrip the human and machine resources necessary to manage and interpret the data. Policy options are being explored through the Data Management Planning Task Force.

SSJ:mak

cc: Jacob Lima

CHESAPEAKE BAY INITIATIVE G2

LIVING RESOURCES/HABITAT MONITORING

I. Progress to Date

- Critical striped bass reproductive habitats in the Upper Bay and Choptank River have been monitored over three spawning seasons: 1983; 1984; and 1985. Abundances of eggs and larval fish have been measured concurrently with numerous measurements of water and suspended sediment quality, including metals, toxic organic compounds such as herbicides and pesticides, acid content, freshwater flow, current velocity, salinity, and temperature. A data report has been completed.
- Continuing fisheries investigations have provided data on striped bass adults, larvae and juveniles. These data are being used in combination with climatic and habitat quality data to develop correlations and empirical models which, eventually, will enable prediction of living resource abundance from certain habitat quality indicators. Some preliminary analyses have suggested relationships which need to be examined in greater detail, such as the association of larval fish abundances with a group of freshwater inflow characteristics.
- Current meter, temperature and salinity data from the Upper Bay are being used to develop a computer model which will predict passive transport of striped bass eggs and larvae, and help to assess the effects of influences such as the Susquehanna River and C & D Canal.
- An oyster habitat monitoring program has been initiated. Some preliminary field work, scientific coordination, and development of a monitoring plan encompassing intensive studies of anoxia, larval food supply, and spatfall in Choptank River oyster habitats have been accomplished.
- An expanded program of monitoring the abundance, survival, condition, and habitat quality of striped bass early life stages has been initiated for 1986. This includes controlled, in situ bioassays, monitoring Nanticoke and Potomac River spawning habitats, and enhancements to ongoing projects in the Choptank River and Upper Bay.

II. Problems and Recommended Solutions

- Adequate staff, equipment and funds are available at present, and projects are functioning well.

III. Issues on the Horizon and Policy Options

- An important issue that has just surfaced relates to coordination between monitoring of fishery stocks and Chesapeake Bay monitoring in general. Because of different organizational structures, funding sources, and scientific objectives, water quality and habitat monitoring appear to be

on a possibly divergent course from monitoring of fishery resources. Attempts to resolve this through interactions between the Chesapeake Bay Stock Assessment Committee and Monitoring Subcommittee have been only partially successful.

- Policy Option: Recognition that these efforts should be parallel, but not necessarily integrated at a technical level. Issues of coordinated data management and information flow should be addressed.

SJJ:law

cc - Jacob Lima

CHESAPEAKE BAY INITIATIVE B-3 ENFORCEMENT OF EROSION AND SEDIMENT CONTROL PLAN

I. Progress to Date

- To assure consistent Statewide enforcement of the State's sediment control law field enforcement responsibility for erosion and sediment control plans was transferred to the Department of Natural Resources with provisions for subsequent delegation of authority to local jurisdictions.
- Enforcement personnel were reassigned on the basis of the decisions on delegation to assure effective statewide inspection and enforcement of the Sediment Control Law.
- Delegation for FY 86 has been granted to the following jurisdictions: Allegany County, Baltimore City, Dorchester County, Harford County, Kent County, Montgomery County, Prince George's County, Washington County, the Washington Suburban Sanitary Commission, Hagerstown, Luke, and Rockville. This is in addition to the following jurisdictions which received 2 year delegation in 1985; Anne Arundel County, Howard County, Baltimore County, Frederick County and the City of Greenbelt.
- An additional item included in the enhancement to the original Initiative was the development of a computer tracking system for all on-going enforcement activities. The Administration has initiated an interim automated tracking system for enforcement violations on the IBM PC.
- Work products which describe the effectiveness of and identify desirable revisions to the Standards and Specifications for Erosion and Sediment Control were completed and furnished to WRA by the consultant. Evaluation of the consultants findings and recommendations by WRA will lead to improvements in the existing Standards and Specifications.

II. Problems and Recommended Solutions

- Personnel turnover within the Sediment and Stormwater Division of WRA has delayed the review of the consultants report on revisions to the Standards and Specifications for erosion and sediment control. However, we anticipate filling existing vacancies and completion of the necessary in-house review by July 1.

III. Issues on the Horizon and Policy Options

- The addition of 4 enforcement inspectors in FY 87 will allow a reexamination of local programs on a continuing basis to assure that jurisdictions granted delegation are performing satisfactorily.
- Final revisions to the Standards and Specifications for erosion and sediment control may require revision to the regulations (COMAR .08.05.01).

Late summer.

CHESAPEAKE BAY INITIATIVE B-4 STORMWATER MANAGEMENT

I. Progress to Date

- The primary objective of the grant program is to ensure that adequate staffing is provided at the local level to meet the July 1, 1984 statewide requirements for implementation and continuation of effective stormwater management programs. That staffing has been accomplished by most jurisdictions whose programs are active at this time. With additional experience and direction by the State, those individuals funded through the initiative will further enhance the efficiency of local programs.
- In Fiscal Year 1985, the Water Resources Administration awarded \$1,175,416 to eighteen counties and six municipalities in support of 57 positions (either full or part-time).
- In Fiscal Year 1986, thus far, the Administration has awarded \$1,458,745 to seventeen counties and eight municipalities in support of 98 positions (either full or part-time).

II. Problems and Recommended Solutions

- Local program reviews are currently being conducted as required by State Law. Reviews have identified areas for improvement, however all local programs receiving funding were deemed to meet minimum criteria specified in the regulations. Solutions to those problems identified, in the form of changes in the direction, emphasis or implementation of the local programs have been recommended to the jurisdictions by the Administration.

III. Issues on the Horizon and Policy Options

- During the past Session of the General Assembly a Bill was introduced which would have required State funding for regional stormwater management studies by local jurisdictions. The Bill failed but future requests for such funding are anticipated.

Purpose:

To maintain freshwater inflow to the Chesapeake Bay by mitigating consumptive water losses in the Bay's watershed and establishing a Statewide water conservation program.

I. PROGRESS TO DATE

A. ACTIVITIES/ACCOMPLISHMENTS

- Published and distributed 300 copies of "Before The Well Runs Dry - A Handbook for Designing a Local Water Conservation Program" to Maryland's community water system managers.
- In cooperation with DDMH/OEP, developed regulations to require counties to demonstrate their compliance with the State Water Conservation Plumbing Fixtures Act in order to gain approval for their comprehensive water and sewer plans.
- Analyzed operating rules for reservoirs in the Potomac River basin to determine if it is possible to increase freshwater inflows to Chesapeake Bay during low flow periods. *Susquehanna is low now.*
- ICPRB also conducted a feasibility study of potential additional storage in reservoirs in the Susquehanna River Basin for use during low flow periods.
- Provided technical assistance for the establishment and maintenance of water conservation programs in the following jurisdictions: the counties of Charles, Howard, Somerset, Carroll, Queen Annes, Anne Arundel, St. Mary's and Calvert and the cities of Annapolis, Westminster and Frederick.
- Developed a cooperative water conservation information exchange program with the states of Delaware, Pennsylvania, & Virginia.
- Coordinated the development of an eight town-home water conservation demonstration project in Howard County.
- Promulgated regulation 08.05.09, entitled "Consumptive Use of Surface Water in the Potomac River Basin" which requires augmentation of consumptive water losses during low flow periods.
- Completed arrangements for a statewide water conservation conference to be held in Annapolis in June.
- Initiated planning for a state program for distribution system leak detection.
- Coordinated the development of a three single-family home ultra low-flow water closet demonstration project in Anne Arundel County.

B. ACHIEVEMENT OF OBJECTIVES

Initial work under the freshwater conservation initiative has shown that there does, in fact, exist significant opportunities for increasing freshwater inflow to the Bay during low flow periods. Structural and non-structural changes are now being implemented which will reduce and off-set consumptive water losses.

The freshwater conservation initiative has been extremely well received by local jurisdictions. With state technical assistance, several counties and municipalities have now begun comprehensive water conservation programs. A number have purchased low flow plumbing fixtures and have initiated residential and commercial hardware retrofitting projects. In addition to helping maintain freshwater inflow to the Bay, the water conservation programs are saving consumers money and postponing the need for costly supply expansion projects.

II. PROBLEMS & RECOMMENDED SOLUTIONS - None

III. ISSUES ON THE HORIZON & POLICY OPTIONS

The basic direction of the initiative remains the same, that is, to maintain freshwater inflow to the Bay through the reduction or off-set of consumptive water losses. The initial program emphasis has been towards preventing unnatural increases in Bay salinity as a result of high consumptive losses during normal low flow periods. Recently, however, the focus of the initiative has been expanded to also include improvements in the quality of wastewater discharges associated with a general reduction in water use.

4/28/86

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

OFFICE OF ENVIRONMENTAL PROGRAMS

STATUS
OF
CHESAPEAKE BAY MANAGEMENT INITIATIVES

APRIL 1986

A-I CAPITAL FUNDING ASSISTANCE

I. PROGRESS TO DATE

1. Construction Grant Match:

This program has done relatively well and now consists of a mixture of 12 1/2% match on all grandfathered projects and 32 1/2% State match on the newer federal projects. The State funds for this program have been adequate based on continuing bond authorizations.

2. Chlorine Removal:

This program has had a slow start due to delays in promulgating regulations. The regulations are now final and grant activities are scheduled to take place shortly. Authorizations to date are only \$600,000 which is inadequate to complete this initiative.

3. Nitrogen Removal:

No funds have been committed towards this element. \$8 million has been authorized to date and first grant action is imminent. Preliminary estimates for this category were short.

4. Agricultural Non-Point:

This program has been extremely successful. Obligations approach \$7 million.

5. Industrial Pretreatment:

This program has had preliminary success with obligations of \$400,000 to three grantees.

6. Urban Storm Water Runoff:

This program has been a slow starter, however, agreements are nearly complete and grant awards are scheduled shortly. The first phase is a handful of projects in the metropolitan area for retrofitting storm water systems.

7. Special Water Quality Needs:

This program has been slow starting due to delays in regulations being finalized. However, a couple of grants have been awarded under the prior failing septic system provisions. There are several additional grants to be awarded shortly since bond sales have just been completed.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

1. Construction Grant Match:

This program does not anticipate any problems with the exception of continued commitments to obtain the necessary funds on a year to year basis in the appropriate bond sales. Projections are extremely difficult at present due to the Clean Water Act amendments.

2. Chlorine Removal:

This program should anticipate no problems except for traditional time delays. Grantees have generally first tried to get federal funds for this purpose and may have been successful. The progress for the remainder will be limited by available funds for this initiative.

3. Nitrogen Removal:

This initiative is successful for the Anne Arundel project. There continues to be uncertainty for the WSSC projects but we believe at this time that the 1986 Chesapeake Bay Loan authorization clarifies the issue and those projects should receive grant awards by the summer. Projections for original funding were short and this initiative needs a total of \$30 million instead of \$18 million. WSSC continues to believe there is a commitment by the State to pay for O&M. This needs to be resolved.

4. Agricultural Non-Point:

This program has suffered from a recent crisis and is presently shut down due to the federal tax bill. It appears this will not be a problem if a new bond sale can be consummated in June. Hopefully the program can start up again.

5. Industrial Pretreatment:

This program has had its problems because of a lack of a clear definition of the relationship between the Department of Health and Mental Hygiene and the Department of Economic and Community Development. Secondly, this program has suffered from the same shut down as the agricultural program due to the tax bill. Funding projections appear to be adequate, however, the yearly bond authorizations have not kept up with the projections. There needs to be a second look at this initiative to determine if it should be continued or phased down.

6. Urban Storm Water Runoff:

This initiative should not suffer from any problems. The second \$1 million authorized in 1986 should conclude the original initiative projection. Hopefully, completion of this element will occur in three to four years if the projects are finished and evaluations are completed.

7. Special Water Quality Needs:

This initiative should proceed smoothly with no problems. It is imperative that a continued dollar commitment be provided and there has been considerable interest from grantees for the supplementary funding. It may be necessary to increase the dollar amount in the initiative over time.

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A-2(1) Pretreatment

I. PROGRESS TO DATE

- Full delegation received from EPA in September 1985
- Regulations adopted and staff hired.
- As of April 1986, 15 or 16 jurisdictions have received program approval. The one remaining municipality has entered into a binding agreement with the State to complete program development.
- Four smaller jurisdictions have binding agreements with their industrial users.
- Three other jurisdictions are doing preliminary studies.
- Three pretreatment loans have been made.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- Need to provide close monitoring of Baltimore city's progress in controlling discharges and in enforcement.
- Monitoring to assure adequate and timely control of toxic discharges from categorical industries.
- Disruption of municipal treatment plants and related violation of NPDES permits.
- Staff shortages.
- Impact of tax reform Federal legislation.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- Federal facilities need to be brought into compliance with pretreatment requirements.
- Development of water quality toxic standards and inclusion of biomonitoring requirements in NPDES permits.
- RCRA and State Hazardous Waste requirements and their impact on POTW pretreatment programs.
- Financial assistance to industries to meet their pretreatment obligations. If tax reform passes, applicants would deal with private financial institutions.

A-2 (2) Municipal Compliance

I. PROGRESS TO DATE

Enforcement activity statistics were considerably better for 1985 than 1984, and 1984 statistics were considerably better than prior years. A statistical summary of enforcement activities for the past few years is provided below:

	<u>Court Actions</u>	<u>Admin. Orders</u>	<u>Consent Orders</u>	<u>Consent Agreements</u>	<u>Fines Assessed</u>	<u>Directives</u>
1985	2	7	10	1	3(\$21,000)	87
1984	1	9	2	1	4(\$82,500)	60
1983	0	6	3	3	0	50

As of the end of 1985, 52% of the 167 POTWs in Maryland were in compliance with final effluent limitations. At the end of 1984, approximately 46% of all POTWs were in compliance. We expect 90% of all POTWs to be in compliance by July 1, 1988.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

Nine State facilities are not in compliance and have no funds available with which to make needed capital improvements. Unless funds are provided, noncompliance will continue unabated.

- ° Lengthy legal review of enforcement actions. Solution: additional attorneys.
- ° Lack of specific standards to define facility adequacy. Solution: Develop standards.
- ° Spill Reporting - Not all collection systems are required to report spills. Solution: place all systems under a General Permit.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

The Water Management Administration is about to embark on a stepped-up enforcement campaign, which includes a heavy reliance on using administrative fines, to assure that at least 90% of all POTWs are in compliance by July 1, 1988.

will go out w/ policy in this

A guidance document detailing the Administration's strategy regarding the use of fines and other enforcement measures has been developed and is about to be instituted.

- ° Establishing a strategy for addressing combined sewer system overflows.
- ° Establishing facility requirements and operation and maintenance regulations or guidelines to be used as standards to assess facility adequacy.

CHESAPEAKE BAY INITIATIVE UPDATE

INDUSTRIAL DISCHARGE COMPLIANCE - A2(3)

I. Progress to Date:

The Waste Management Administration has filled all Bay Initiative funded positions as the monies became available. While doing this, the Enforcement Program of the Agency filled 14 of the 17 positions with minority candidates.

This hiring program and subsequent training lead to the development of, according to EPA, Region III, "The best NPDES Enforcement Group in the Region, if not in the Country."

These inspectors completed for calendar year 1984, 825 inspections of industrial facilities. In 1985, a total of 1,075 inspections occurred which resulted in \$97,495.00 in civil penalties collected rising from 133 formal enforcement actions during that year.

II. Problems and Recommended Solutions:

The major problem facing the Agency is effective data management and efficient and timely data retrieval. It is the Agency's goal to proceed with the implementation of a computerized Consolidated Data Management Information System. To that end, an RFP was announced in the April 4, 1986, Maryland Register. Bid selection for equipment purchase is to be completed by June 30, 1986 and equipment delivery is anticipated for this Fall.

III. Issues on the Horizon and Policy Options:

Looking toward the future, the Agency has been working with the regulated community and research groups to develop criteria for permits to address total toxics and bio-monitoring. The Agency is proceeding carefully to insure the best data base for these limits, while striking a fair balance between costs and effective environmental cleanup and protection.

I. Progress to date:

Some delays in each of the two elements of this initiative have been experienced but as of this date all major problems have been resolved. The status of each element is presented below:

- a) Bioassay laboratory - Under the 1984-85 agreement with the University of Maryland at Baltimore, an attempt was made to obtain the services of Johns Hopkins University in establishing a bioassay laboratory. With UMAB being unable to establish an effective subagreement, DHMH is now working with the University of Maryland Center for Environmental and Estuarine Studies and expects that an agreement with JHU will be in effect by May 1, 1986. Following 4 to 6 months of facility development, DHMH expects the laboratory to begin accepting effluent samples for evaluation.
- b) Field Studies - Three professionals and one technician have been hired to conduct in-stream ecological studies on the effects of industrial point source discharges. A draft document outlining standard operating procedures is nearing completion. One pilot study has been completed and another is underway. The staff should be ready to begin accepting requests for operational studies by the latter part of 1986.

II. Problems and Recommended Solutions

All current and perceived problems are relatively minor and consist primarily of obtaining adequate working space and equipment. These problems are being addressed and resolutions are imminent.

III. Issues on the Horizon and Policy Options

Toxic effects are not black and white issues. Toxic effects range from immediate lethality to marginally disruptive. These effects also vary tremendously from one species to another and from fresh to salt-water. As we begin to gather information on the toxic potential of various dischargers, we will need to develop a consensus of an acceptable level of toxicity. The options to be considered will be numerical in nature. For example, the level of protection could be set at any of the following:

- 100% protection, all species at all times
- 95% species protection, 95% of the time
- 75% species protection, 90% of the time

As can be seen, there are numerous alternatives. The first decision we need to consider is whether the selected level of protection should be set a priori, based on literature values or EPA criteria, or established after a data base is established for Maryland.

OEP will need to be prepared to explain our toxics control strategy to industry. Industry should be provided with control options, be it end of pipe treatment or changes in the manufacturing process. Seminars on the subject should be presented by the State or private consultants.

A positive, up-front, approach by OEP in presenting their goals and procedures on the toxics control issue could lead to more cooperation and less conflict in the regulatory implementation efforts.

A-3 Financial Management of STPs

I. PROGRESS TO DATE

- ° Draft regulations prepared, distributed, and comments received.
- ° Fiscal Specialist III position filled in October 1985.
- ° Program strategy prepared by December 1985.
- ° In early 1986, selected local governments were sent copies of the proposed financial reporting forms. Comments on them have been positive.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- ° Position became vacant in mid April 1986
- ° Agencies' leverage over local governments who are doing poor financial management for sewerage is weak.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- ° Plan to publish the financial management regulations in summer 1986
- ° Need a strategy and clear policy for dealing with reluctant local governments.

A-4 DECHLORINATION

I. PROGRESS TO DATE

A draft priority list has been established based on pre-applications received by this office. Several projects have been submitted to State Clearinghouse and letters requesting an application for funds and a brief report be submitted for funding will be sent before the end of April. These projects include:

Cambridge

Sharptown

II. PROBLEMS AND RECOMMENDED SOLUTIONS

None

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

None

*more than
half are already
dechlorinating*

A-7 Use of Innovative and Alternative Sewage Systems

I. PROGRESS TO DATE

- Filled 4 staff positions.
- Conducted over 200 I/A site evaluations for on-site sewage disposal throughout the State.
- 76 systems have been designed or installed. 20 systems are being intensively monitored.
- A 2-day site evaluation training workshop was developed and presented in 4 regions. 69 sanitarians attended.
- Special field training sessions in 5 counties have also been conducted.
- 2 sets of regulations were finalized.
- An interim Department policy and revisions to COMAR 10.17.02 have been developed to incorporate sand mound systems, under certain soil conditions, as "conventional" technology.
- Anne Arundel, Kent, St. Mary's, and Washington Counties have each received \$37,500 of grant funds.
- 5 additional counties have been contacted regarding distribution of FY'86 funds.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- County health department workloads and wet season testing activities often result in less follow-up monitoring of installed systems.
- Need to improve training for local health department staff, designers, and contractors.
- Recommended solution: additional staff at State and county level dedicated to I/A activities and additional budget support for training workshops.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- Certification programs for contractors and installers.
- Providing additional resources.

A-8 STP Operator Training

I. PROGRESS TO DATE

- ° Treatment plants whose performance have been inconsistent have been referred to the program by the Municipal Compliance Division.
- ° The following plants have experienced significant improvements as a result of technical assistance: Princess Anne, Thurmont, Westminster, Indian Head.
- ° Other communities that have received assistance are:
 - Bolling Green
 - Broad Neck
 - Centerville
 - Chesapeake Beach
 - Cresaptown
 - Fairmount
 - Friendsville
 - Georges Creek
 - Mattawoman
 - Millington
 - Oxford
 - Perryville
 - Prince Frederick
 - Sharptown
 - Snow Hill
- ° Laboratory training has also been provided to some treatment plants.
- ° Follow-up evaluations showed participants very appreciative.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- ° Other facilities where technical assistance has been carried out have improved operation, but not achieved compliance due to overloaded facilities.
- ° More definitive measures of effectiveness should become available when the recordkeeping of the Municipal Compliance Division is improved with the addition of data processing equipment.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- ° The EPA share of the Maryland Center for Environmental Training technical assistance budget has dropped from \$45,000 in 1986 to \$35,000 in 1987 and may be phased out entirely within the next year or two.
- ° A similar program for water treatment plant operators would be helpful to smaller municipalities.

Initiative A9: Water Quality Basin Planning

I. PROGRESS TO DATE

- A. Draft Revised Water Quality Management Plans (WQMP) for the Chester River Basin the Elk/Lower Susquehanna, and the Middle Potomac River Basins were completed and are in process of being finalized for submission to EPA.
- B. DHMH/OEP is cosponsoring the Chester River Watershed Workshop: Strategies to Conserve the River (5/17/86) with the Chesapeake Bay Foundation and several other organizations. This OEP activity is a direct result of the recent river basin planning effort undertaken by OEP in the Chester basin.
- C. Public Advisory Councils (PACs) were reactivated in the Choptank, Lower Potomac, and Ocean-Coastal Basins (11/85). Staff work to prepare draft revised WQMPs for each of these watersheds is well underway. Draft plans are scheduled to be completed by the end of 1986.
- D. The first WQMP Program Report was prepared (1/86). This document, entitled "Patuxent River Basin Update," summarizes recent State WQMP implementation actions that have been taken or are underway within the Patuxent River basin. Progress reports for each newly revised WQMP will be prepared subsequent to final plan adoption.
- E. Chesapeake Bay Implementation Projects Grant
 - FFY84/85 Grant (Total: \$3,050,000)
A total of seven memoranda of understanding (MOUs) encumbering \$2,132,250 have been executed as of April 23, 1986. Twelve MOUs are scheduled to be executed by or before July 1, 1986 to encumber remaining funds.
 - A total of \$612,500 has been expended as of April 23, 1986.
 - Visible results are anticipated this summer for at least five major projects including: 1) Wye Island shore erosion control, 2) agricultural cost-share projects in priority watersheds, 3) Towser's Branch stormwater management, 4) Somer's Cove, Herrington Harbour, Bar Harbor marine pumpouts, and 5) Susquehanna basin forest management.
 - During March, at the request of EPA, OEP staff prepared and submitted a draft grant application and work program for FFY86/87. Review comments have not yet been received; however, EPA/CBP has indicated that a July award date is anticipated.
- F. Water quality planning staff have performed periodic assignments related to servicing the needs of the Critical Area Commission and review of CA "interim findings" for specific development proposals.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- A staff deficiency which affected the operation of the planning program during 1984 and part of 1985 has been addressed through the addition of two positions. OEP now has a River Basin Planning Unit (one new position; now totals three) within the Water Quality Planning Section which devotes the majority of its staff time to basin planning. The second position has been dedicated to management of the Bay Implementation Grant Projects.

Initiative A9: Water Quality Basin Planning
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III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- The relationship between the river basin plans and the Bay Protection and Restoration Plan should be clarified. One option is to incorporate the appropriate WQMPs by reference in Maryland's portion of the Bay plan.
- Related to the above and to the recently adopted legislative resolution is the issue of the development of suggested nutrient target loads and ways to achieve these loads. It is strongly recommended that this effort not be undertaken as a separate effort. Rather, it should be addressed within the context of the WQMP's. Each revised WQMP currently contains a new section on nutrient loads which lays an initial foundation for such an effort.
- The extent to which the water quality planning staff may be called upon to provide increased assistance related to the Critical Area program will influence future staff needs and programming of work activities.
- Future reductions in federal 205(j) funds will directly affect the planning program. (Four of the six professional staff positions in the Water Quality Planning Section are supported by this fund source.) It is recommended that priority consideration be given to replacing these funds with State general funds. (OEP is developing an initiative to this effect.)

B-2 Enforcement of Agricultural Nonpoint Pollution

I. PROGRESS TO DATE

One man year has been dedicated in WAT for this activity. WAT began the investigation of these complaints in July 1983. Since beginning this program, 48 complaints have been investigated statewide. The status of these cases follow:

- 1. Immediate referrals to WAS.....4
- 2. Referral to WAS after failure of voluntary approach.....1
- 3. Resolved voluntary through BMP implementation.....15
- 4. Under investigation, pending plan, or verification of action.....8
- 5. No action required.....20

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- o State and local agencies are the source of nearly 60% of referrals to WAT for action. Cooperation with these agencies is essential to the effective resolution of these complaints. The State "208" Plan is the mechanism for identifying agriculturally related pollution and setting forth procedures and methods to control these sources. The State Soil Conservation Committee is currently trying to approve a new plan that would include an updated enforcement component. This plan needs to be finalized and approved as soon as possible to ensure that the enforcement procedures are clearly understood and accepted by those State agencies responsible for controlling these sources of pollution.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- o Cost share funding - Many of the problems encountered in the investigation of agricultural complaints are ultimately solved through the use of State cost share funds. It is imperative that the level of cost share funding is adequate to help farmers meet their responsibilities in the future.
- o Critical areas legislation - Some thought must be given to the development of procedures that will be employed in agricultural enforcement relative to the newly adopted critical areas legislation. In short, how will State agencies interact with local governments when agricultural complaints occur in the critical areas?
- o Future staffing - It is anticipated that this enforcement program will grow in the future, thus, additional personnel will be required. It should be noted that current staffing is adequate, but any significant increase in workload will cause difficulty in responding to these complaints in a timely manner.

Initiative B5 - Stormwater Pollution Control Cost-Share Program

I. Progress to date

- Rules and regulations promulgated and adopted April 8, 1985
- Six projects approved August 15, 1985
- Preliminary designs received from all six
- State bonds sold to cover a portion of the initial \$1 million appropriation
- MOU's developed - projects to go to State Clearinghouse on a staggered basis and to BPW for approval thereafter
- First project construction expected July 1986. All projects (first \$1 M) expected to be completed winter '86 - no significant problems to date
- Second \$1 M bond money was approved by 1986 legislature; expect to solicit second group of projects in June or July 1986

II. Problems and Recommended Solutions

- Encumbrance of initial \$1 M has been delayed due to delay in sale of State bonds.
Recommend: Whatever action could be taken to ensure timely bond sale for remaining funds.
- Significant startup for project implementation is needed to allow for proper local design and State design review and approval.
Recommend: Continue State technical assistance which is a joint responsibility for OEP and DNR.

III. Issues on the Horizon and Policy Options

- Program evaluation should be undertaken to determine the effectiveness of the program, the need for additional cost-share funds, and the need for additional State personnel to provide technical assistance and project management.
- An issue related to the expansion of this program beyond a demonstration effort is the need to target program funds to meet water quality objectives.

NOTE: Program is undertaken in close cooperation with DNR's Stormwater Management Program. Information developed from the cost-share program should be incorporated in design manuals or other program documents that address stormwater management in newly developing areas.

B8 Water Quality Certification Plan

I. PROGRESS TO DATE

- o Three new staff positions are filled
- o Regulations describing the 401 water quality certification process have been adopted
- o Handbook for water quality certification applicants has been developed
- o Joint application form for use by DNR Wetlands and OEP Water Quality Certification Program has been developed and is in use
- o 375 applications for water quality certification reviewed since February 1, 1985; 348 water quality certifications issued; 5 denied.
- o Preliminary criteria for marina assessment developed and under peer review
- o Survey of marinas planned for summer of 1986 to investigate need for and use of vessel sewage pumpout facilities
- o Literature search made and report prepared describing effects of turbidity on aquatic life; currently in peer review
- o Preliminary criteria for agricultural drainage channel assessment developed and under peer review
- o Mailing list for public notification of certification applications developed and in use on computer
- o Joint processing agreements developed between DHMH and DNR (in use) and DHMH and the Corps (in review)
- o Computerized database developed and in use for water quality certifications

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- o Lack of interagency coordination leading to duplication of effort by various agency personnel (Corps, DNR, DHMH)---Obtain Corps approval and use of joint application form
- o Program support inadequate (secretarial, computer)---Fill vacant Office Secretary position, obtain at least 3 new computers
- o Lack of public awareness of program and its goals---Distribute the newly printed handbook for applicants; complete the development of the marina assessment criteria and public drainage assessment criteria; develop similar criteria for shoreline modification proposals

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- o Determine the enforcement capability of this program
 - o No change in current status (no enforcement by DHMH)
 - o Joint effort with Corps and DNR
 - o Individual effort by DHMH personnel
- o Denial of State certification for Corps General Nationwide Permits
 - o Reverse denial if review of upcoming projects supports this course of action
 - o Develop State general permits and criteria for same
- o Critical Area legislation
Because this legislation is so new, no options can be given to the questions surrounding the implementation of the new regulations and the interaction with the 401 certification program. These questions will need to be addressed by senior staff as well as the certification staff. Staff manpower must not be spread too thin when deciding a course of action with regard to these new regulations.

E-2 Freshwater Conservation

I. PROGRESS TO DATE

- ° Draft regulations were prepared and distributed to local agencies, authorities, and county officials in August 1984. Comments were received and reviewed by OEP's Water Management Administration planning staff and program directors. Most of the respondents were opposed to implementing local water conservation programs. The initial draft regulation has recently been revised and will be published in the Maryland Register by June 1, 1986. Informal recent surveys by Senator Winegrad's staff have shown that, in at least some counties, market forces are tending to make water-conserving plumbing fixtures the only ones stocked by local supply houses. It appears that some of the hoped-for benefits of this initiative already are occurring.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- ° Local agencies and authorities in most suburban and rural areas seem not to understand or appreciate the value of a public water conservation program. In contrast, a few of Maryland's urban jurisdictions (WSSC, Anne Arundel, Howard, and Charles Counties) have implemented successful programs. An effort should be made to educate the recalcitrant jurisdictions to the economic and operational advantages of water conservation. For the near term, although the "leverage" between State approval of local water and sewerage plans and the local implementation of water conservation measures is weak, OEP will simply have to use available staff to try to persuade local planners to voluntarily include the necessary information about local water conservation efforts in the respective water and sewerage plans.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- ° As the expenses of operating and maintaining sewage treatment plants increase, more and more local agencies should become aware of the economic merits of their enforcement of effective local water conservation programs. A strategy and policy should be developed to entice local entities to implement effective water management programs; to that end, OEP is actively supporting the work of DNR's Water Conservation office.

CHESAPEAKE BAY INITIATIVE

Category G 1 - Regional Data Center

I. Progress to Date

A data center was located in Annapolis in 1983 to serve the data base management and computer modeling needs of the Chesapeake Bay region. Initially, this data center consisted of a new Digital Equipment Corporation VAX-11/780 computer with exiting peripheral devices (disk drives, tape drives, and printers) from the previous Chesapeake Bay Program. This year the memory was expanded to 12 megabytes and the disk storage to 2 gigabyte. The ports were expanded to 64 ports. New analysis and modeling software consisting of the .IMSL Library, TWODEPEP, PROTRAN, and STATRAN were purchased this year.

II. Problems and Recommended Solutions

Problem 1.

During normal working hours the time for completion of statistical Analysis System (SAS) runs has increased from half an hour to four to eight hours. Because SAS is the package used to verify and edit the data, the increased time of completion of these data management tasks has contributed to DEP's difficulty in submitting monitoring to EPA within a 60 day period.

Solutions for Problem 1:

One solution to this problem recommended by DEP was to increase the time period for data submission from 60 days to 90 days. This was not acceptable to EPA.

Another solution to this problem recommended by DEP was to allow DEP to have exclusive use of the VAX during certain times of the day. Such a policy was permitted by EPA in January when DEP undertook a second intensive verification of the previously submitted data. DEP requested that this policy would continue but was denied by EPA.

Another solution is to upgrade the VAX-11/780 to a VAX-11/785 or to a VAX 3600.

Problem 2:

Insufficient staff for reviewing data sheets, verifying data, and editing data. These tasks are more person intensive than originally realized.

Solution for Problem 2:

Provide positions for two Natural Resource Biologist to perform the labor intensive tasks of reviewing data sheets, verifying data, and editing data.

Problem 3:

Impossibility of obtaining additional data processing programmer positions. The result is that many non-data processing personnel are performing data processing tasks and are being paid at salaries lower than the data processing programmer series.

Solution to Problem 3:

Initiative G2: Monitoring of Water Quality

I. PROGRESS TO DATE

- o Fully implemented 7 major elements of the State of Maryland's Chesapeake Bay Water Quality Monitoring Program: (Completed data analysis reports 5 of the monitoring elements.)
 1. Chemical/physical monitoring of ambient water quality and sediment toxicants at 56 locations in tidal waters of all major tributaries to Chesapeake Bay (linked with EPA-funded mainstem monitoring).
 2. Chemical/physical monitoring of river-inputs from the Susquehanna, Potomac, Patuxent and Choptank Rivers.
 3. Phytoplankton/microzooplankton monitoring at 16 locations in the tributaries and mainstem.
 4. Zooplankton monitoring at 16 representative locations in the tributaries and mainstem.
 5. Benthic organism monitoring at 70 representative locations in the tributaries and mainstem.
 6. Ecosystem processes (sediment nutrient flux, sediment oxygen demand, sedimentation rates) monitoring at 10 locations in the tributaries and mainstem.
 7. Toxic chemical bioaccumulation monitoring at 6 locations in the tributaries and mainstem.
- o A non-point source monitoring project covering the Patuxent basin has been initiated. Monitoring for baseflow and storms has been fully implemented at 12 sites. This data source pollution model to be used for water quality management and planning purposes.

II. PROBLEMS AND RECOMMENDATIONS

- o Contractual elements (items 2-5, above) of the program have been level funded since FY'85. Level funding in the face of cost of living increases and initial underestimates of cost, have necessitated substantial cutbacks in the program to the point where major objectives will be sacrificed starting in FY'87. Cost of living increases need to be provided for.
- o Despite 2 years of requests, there are still no permanent positions assigned to the mainstem monitoring program.
- o EPA will likely cease funding the mainstem program in FY'89. This will necessitate advance planning to provide for future state support for this critical element of the program.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- o If this program is to yield the expected results, it must be sustained for many years as stated when this initiative was conceived.

• " G-3 Research and Management - Research

I. PROGRESS TO DATE (Project A)

- Patuxent River Estuary Model. the development of a time variable, 2-dimensional, laterally averaged eutrophication model of the Patuxent river Estuary for use in developing a basinwide management plan, and wasteload allocation studies. This project consists of 5 elements:
 - Hydrodynamic monitoring - a one-year program to collect water transport data such as current speed and direction, tidal heights, etc.
 - Water quality monitoring - 18 slack water cruises at 14 stations to collect water chemistry and biological data.
 - Hydrodynamic modeling - an 18-month program to calibrate and verify a 2-d, real time, laterlly averaged hydrodynamic model using data from #1 above.
 - Interface of models - a 12-month program to develop software computer program to spatially and temporally average hydrodynamic model output.
 - Water quality modeling - a 2-year program to calibrate and verify a 2-d, time variable, laterally averaged water quality model.
- The hydrodynamic monitoring program was initiated in October 1985 and data has been continuously collected since that date. Additionally, OEP has received monthly progress reports from the contractor, the University of Maryland.
- A version of the hydrodynamic model code was tested in the Patuxent by Dr. Peter Olson of Johns Hopkins University using available historical data. the source code of the program was modified to accept time variable freshwater flows, and accommodate the deep hole around Point Patience. OEP received two reports documenting the findings of this effort. The geometry has now been finalized.
- The kinetic structure of the water quality model has been finalized.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- Uncertainty of continued funding through December 1987. Solution: Obtain guarantee of continued funding at requested level of \$80,000 FY'87 and \$100,000 in FY'88.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- Nonpoint source research
- Groundwater research
- Toxics cycling

G-3 Research and Management (continued) (Project B)

I. PROGRESS TO DATE

- ° Carbon cycling in the Chesapeake Bay: Limitation of Planktonic Secondary Production and Possible Effects on Bay Anoxia. This research is designed to determine whether phytoplankton carbon present at ambient concentrations or in blooms of dinoflagellates or blue-green algae support production in the water column, or whether the carbon ultimately remains ungrazed and settles to the bottom perpetuating bottom water anoxia. Specifically, this project will:
 - ° identify the relationship between suspended sediment concentrations common to the Bay and tributary waters and zooplankton incorporation of natural phytoplankton carbon, subsequent production and potential supply of algal carbon to the bottom waters of the Bay; and
 - ° estimate the portions of ambient phytoplankton assemblages, including blooms of nuisance algae, that support zooplankton production or benthic oxygen demand in the Bay watershed.
- ° The contractor has initiated the complete field and laboratory program. A preliminary status report has been submitted to OEP for review. The project is scheduled for completion in August 1987.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

Not applicable.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

Not applicable.

G-3 Research and Management - Management

I. PROGRESS TO DATE

- Executive Council, Implementation Committee, 5 Subcommittees, CAC and STAC are all operational.
- Monitoring program being implemented effectively.
- One-year and 3-year Chesapeake Bay Restoration and Protection Plans have been prepared and published.

II. PROBLEMS AND RECOMMENDED SOLUTIONS

- Difficulty in sustaining concerted effort particularly writing the several reports specifically 4 quarterly status reports; 1 annual State monitoring report, 1 annual interstate monitoring report, 1 annual state report on our initiatives, 1 annual interstate report on the Chesapeake Bay Program, 1 annual update of the Plan. Solution: See if any of these reports could be eliminated or combined.
- Phase II Chesapeake Bay Restoration and Protection Plan imposes considerable additional workload which may detract from implementation efforts. Solution: Decide how we are going to do Phase II and what we expect to get out of it that we don't already have. Discuss with other states.

III. ISSUES ON THE HORIZON AND POLICY OPTIONS

- Possible termination of Federal funding for Chesapeake Bay Program.
- Until the Clean Water Act is reauthorized with the Chesapeake Bay Program in it, we don't have funding beyond FY'87. Need to think ahead what we want to do if it doesn't get reauthorized and funded by the Federal Government.

4/28/86



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ENVIRONMENTAL EDUCATION INITIATIVE

Progress to Date

The Environmental Education Initiative is completing its' second year of providing Maryland's public school systems with programs related to efforts to revitalize the Chesapeake Bay. The Maryland State Department of Education would like to share with you some of the activities that have had direct impact on Maryland students and teachers.

Environmental Education Grants

Grants to school systems foster projects which use the creative abilities and expertise of teachers and administrators. The grants recognize the diverse advantages, needs and circumstances that exist in Maryland's school systems. Funding has focused on multiple year programs that involve students in local, community action projects. Programs have been funded in 16 of Maryland's 24 school systems. A list of projects is attached.

Teacher Training Programs

Good environmental education depends on good teaching. Therefore a variety of inservice training and material development programs are being implemented to improve both the skills and resources of Maryland's public school teachers.

"Decision Making/The Chesapeake Bay" is a simulation game focusing on the many different users of the Bay - and on the ways in which the democratic process addresses the complex environmental questions that face decision makers. Since this demands a working knowledge of Bay resources and problems, students learn about estuarine science and policy making at the same time. The "Decision Making" curriculum has been revised and reprinted in cooperation with the University of Maryland Sea Grant College. Secondary science and social studies teachers throughout Maryland have been trained to use these materials effectively.

Need to begin to develop a major program in the long run to have environmental sciences emphasized.

Environmental Education Initiative

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A regional "Teacher Leadership Institute" in environmental education is another part of the Bay Initiative's inservice efforts. Started in Southern Maryland this past summer and continuing through the fall, selected teachers from the Charles, St. Mary's and Calvert County school systems are receiving intensive training in Chesapeake Bay related environmental education. Following the completion of the Institute, funding is available to enable these teachers to train other teachers within their respective school systems.

Estuarine Field Studies Program

Direct, first hand experience by students and teachers is a vital part of the overall Bay Initiative effort and is important to making classroom activities come alive for students and teachers alike. The Initiative's increased funding for the Estuarine Field Studies Program has enabled the Chesapeake Bay Foundation to better address the demand from Maryland schools for field experiences on the Bay. New and expanded programs in the north bay, on waterfowl biology, at Claggett Farm Center and now on oystering and skipjacks, have been enthusiastically received by Maryland schools.

Project Direction

The Environmental Education Initiative has funded a state specialist in environmental education. This specialist is responsible for implementing the various Initiative programs as well as providing statewide direction and coordination of environmental education programs. This includes assistance to local school systems as they develop and implement grant programs, teaching and evaluating inservice programs, rewriting and development of curriculum materials, and providing staff development and evaluation of the Estuarine Field Studies Program. Assistance and coordination has also been provided to other state agencies and organizations who have renewed or expanded their environmental education efforts. This includes a variety of programs from other state and federal agencies.

New efforts from within the traditional environmental education community have also received a boost as a result of the Initiative. The creation of the Maryland Association for Environmental and Outdoor Education (MAEOE) is perhaps the most important example. MAEOE recently held Maryland's first environmental education conference at the University of Maryland's Horn Point Labs. MAEOE is also publishing a quarterly newsletter and will soon publish a statewide directory to environmental education resources.

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- o Baltimore County - Gunpowder River School Action Project
This funding will bring to 20 the number of elementary, middle, and secondary schools involved in this excellent project. Funding includes curriculum development, inservice, and transportation for students.
- o Kent - Chesapeake Bay Studies for Kent County Youth
Kent is institutionalizing an outdoor education experience for all 5th graders. This funding will cover about 60% of the cost for a three day experience for about 155 students at a local private camp. The system will pick up the rest of the tab.
- o St. Mary's - Two rivers - one land
St. Mary's will be developing a 5th grade science and social studies - humanities unit focused on culture and environment of their county. They will be involving numerous local "people resources" in their program. This is a spin off of a successful humanities program at Hollywood elementary.
- o Dorchester/Caroline/Talbot - The Choptank - Tri-Counties shared resource
An inservice project that teams less experienced environmental educators with those more experienced and puts them to work developing their skills in summer environmental programs on the Choptank with elementary and middle school kids.
- o Baltimore City - Water -watershed awareness testing and environmental responsibility
Elementary, middle, and senior high schools along the Jones Falls River will be involved in curriculum development, field work on the Jones Falls, and actions projects in cooperation with "Save our Streams".
- o Harford - Marsh and Estuarine environmental studies
Funds will be used to write Chesapeake Bay - Environmental Science unit for 10th grade biology year. Includes summer inservice with CBF and me.
- o Allegany - Environmental Education grant
A high school environment monitoring project on the Potomac and its tributaries.
- o Washington - Washington County and the Bay
Funding will support development of a teacher's guide, a summer inservice, an environmental science seminar and equipment to study the Potomac watershed. Considerable local funds also support this effort.
- o Prince George's - Environmental ed K-12
CBF runs a three day experience at Claggett Farm in Upper Marlboro that focuses on point and nonpoint pollution, agriculture and residential development, and down stream effects. Last year's funding paid for classroom

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pre/post field trip curriculum development, a four day summer inservice, and some transportation assistance. Schools use the Prince George's outdoor ed center as "home base" during the three day CBF trip thus allowing extra opportunities for instruction.

o Charles - Nanjemoy Creek/Potomac Ecology

Charles is developing an outdoor education site on donated land off the Nanjemoy Creek. Funding will pay for canoes for use at Nanjemoy, development of a course of study for Nanjemoy, several student trips to the site, and some inservice.

o Somerset - E.E. for Somerset County

A group of teachers received some special e.e. training in '82 and '83. This funding would: 1) allow these teachers to inservice others; 2) fund development of a 6 week Chesapeake Bay unit for 9th grade; 3) support student field trips; and 4) document "best e.e. lessons" for K-12.

o Follow-up grants to Charles, St. Mary's, and Calvert as part of the "Teacher Leadership Institute in Environmental Education" conducted in those systems last year.

Teachers trained as part of that summer Institute will use these funds to train other teachers in their own system.

o Howard County -

1) Decision Making/The Chesapeake Bay - An STS Exemplar

The Decision Making curriculum will be folded into the Biology curriculum. County teachers, trained by MSDE last year, will then train more county teachers.

2) Howard County Streams - An Elementary Experience

Selected elementary school teachers will be trained by MSDE in stream ecology and environmental science. These teachers will then train other 5th grade teachers to conduct the program using the new curriculum.

o Conservation Education Council of Maryland - Expanding environmental education in Maryland

This funding supports several statewide efforts including

1. Completion of statewide inservice for the Decision Making/The Chesapeake Bay Curriculum (most of the funds go here)
2. Development of a state environmental/outdoor ed. resources guide
3. A first ever e.e. conference for teachers and by teachers
4. Funds for environmental ed briefing
5. Funds for outdoor education for handicapped inservice
6. Support of outdoor biology component of C.A.S.T. project