

Committee Meetings & Correspondence June 1988

USA S 1832-46



file

JUDGE SOLOMON LISS  
CHAIRMAN

STATE OF MARYLAND  
**CHESAPEAKE BAY CRITICAL AREAS COMMISSION**  
DEPARTMENT OF NATURAL RESOURCES  
TAWES STATE OFFICE BUILDING, D-4  
ANNAPOLIS, MARYLAND 21401  
974-2418 or 974-2426

SARAH J. TAYLOR, PhD  
EXECUTIVE DIRECTOR

COMMISSIONERS

May 25, 1988

- Thomas Osborne  
Anne Arundel Co.
- James E. Gutman  
Anne Arundel Co.
- Ronald Karasic  
Baltimore City
- Albert W. Zahniser  
Calvert Co.
- Thomas Jarvis  
Caroline Co.
- Kathryn D. Langner  
Cecil Co.
- Samuel Y. Bowling  
Charles Co.
- G. Steele Phillips  
Dorchester Co.
- Victor K. Butanis  
Harford Co.
- Wallace D. Miller  
Kent Co.
- Parris Glendening  
Prince George's Co.
- Robert R. Price, Jr.  
Queen Anne's Co.
- J. Frank Raley, Jr.  
St. Mary's Co.
- Ronald D. Adkins  
Somerset Co.
- Shepard Krech, Jr.  
Talbot Co.
- Samuel E. Turner, Sr.  
Talbot Co.
- William J. Bostian  
Wicomico Co.
- Russell Blake  
Worcester Co.

Dear Commission Member:

The next Meeting of the Chesapeake Bay Critical Area Commission is scheduled for June 1, 1988 from 1:00 to 5:30 p.m., at the Department of Agriculture Building, 50 Harry S. Truman Parkway, Annapolis.

The Minutes of the May 18th Meeting are enclosed as well as the Agenda for this Meeting. Also enclosed is a copy of the generic Program which has been developed for those local governments that do not have local Programs that are at the stage where they can be voted on by the Commission, or implemented locally by the jurisdictions. Please read this Program as we will need to adopt it at the June 1st Meeting.

Please note that as of June 1st, there will be no parking permitted along the road by the Department of Agriculture, as the road will be opened to through traffic at that date. Instead, the parking lots must be used to avoid ticketing and towing.

Sincerely,  
*Solomon Liss*  
Solomon Liss  
Chairman

SL/jjd

CABINET MEMBERS

Attachments

- Wayne A. Cawley, Jr.  
Agriculture
- J. Randall Evans  
Employment and Economic Development
- Martin Walsh, Jr.  
Environment
- Ardath Cade  
Housing and Community Development
- Torrey Brown  
Natural Resources
- Constance Lieder  
Planning

*We need your votes at the meeting. Please attend.  
P.L.*

CHESAPEAKE BAY CRITICAL AREA COMMISSION

AGENDA

Department of Agriculture  
50 Harry S. Truman Parkway  
Annapolis, Maryland

June 1, 1988 1:00 - 5:30 p.m.

1:00 - 1:10	Approval of Minutes of May 18, 1988	Solomon Liss Chairman
1:10 - 1:30	Vote on Annapolis	Marcus Pollock/ Panel
1:30 - 1:50	Vote on Calvert County	Ren Serey/Panel
1:50 - 2:00	Vote on Chesapeake Beach	Ren Serey/Panel
2:00 - 2:20	Vote on Indian Head	Ren Serey/Panel
2:20 - 2:30	Vote on Chestertown	Ren Serey/Panel
2:30 - 3:15	Presentation of Generic Program & Listing of Jurisdictions to Which it Will Apply	Dr. Kevin Sullivan
3:15 - 3:30	Break	
3:30 - 4:00	Presentation on Susquehanna State Park Boat Ramp	Robert Ellsworth, Waterway Improvement Division, DNR
4:00 - 4:15	Old Business: Project Notification	Dr. Sarah Taylor
4:15 - 5:30	New Business: HB 296 -- Oil & Gas Criteria The Use of Dimilin in the Control of Gypsy Moths	Dr. Sarah Taylor

Next Commission Meeting: June 15th, Merkle Wildlife Sanctuary

CHESAPEAKE BAY CRITICAL AREA COMMISSION

Minutes of Meeting Held  
May 18, 1988

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:

Samuel Bowling	G. Steele Phillips
William Bostian	Wallace Miller
Thomas Osborne	J. Frank Raley
Robert Price	Kathryn Langner
Victor Butanis	Albert Zahniser
Shepard Krech, Jr.	Ronald Karasic
Ronald Hickernell	James E. Gutman
Thomas Jarvis	Samuel Turner
Ronald Adkins	Secretary Lieder of DSP
Carolyn Watson for Parris Glendening	Robert Perciasepe of DOE
Deputy Secretary Cade of DHCD	Secretary Cawley of DOA
Deputy Secretary Griffin of DNR	Robert Schoeplein for Secretary Evans of DEED

The Minutes of the Meeting of May 4, 1988 were approved as written.

Chairman Liss asked Mr. Marcus Pollock to report on the status of the Program for Anne Arundel County. Mr. Pollock said that the Commission had given tentative approval to the Program, subject to a number of changes that were required both by staff and Panel, and since that time, he has met, several times with the County planning staff to negotiate those changes. A public hearing was held in April on those changes. Mr. Pollock said that the Panel recommends that the Program be approved. However, the Panel is not satisfied with the methodology by which the County has calculated its growth allocation, and would like additional time for a review.

James Gutman, Panel Chairman, agreed that the Program was satisfactory and since the County is not planning to use any of the growth allocation in the immediate future, their methodology is not an issue at this point.

A motion was made and seconded that the local Critical Area Program for Anne Arundel County be approved, to include the legislation as well as the maps, and the Panel be given additional time to review the growth allocation element. The vote was 20:0 in favor.

The  
Vote

Mr. Pollock then reported on the Program for Harford County. He reminded the Commission the Program was approved with the exception of the issue concerning the Old Trails/Lee National property. He said that he has recently communicated with Mr. Meyer, a principal planner of Harford County, who informed him that the planning office had agreed that growth allocation be used to give the area under question, the intensely developed classification.

Mr. Pollock then said that regarding Havre de Grace's Program, there were some minor corrections that needed to be made. There were some problems discovered concerning the City's ordinances, but he and the City were now in the process of working on those changes to the language of the ordinances.

Chairman Liss then gave an explanation of the reasons for the tabled motion for the Commission's preparation of Cecil County's Program and informed the Commission of correspondence received from the Chesapeake Bay Foundation, which expresses similar concerns to that of the Commission. He then opened the floor for discussion.

Secretary Lieder, Cecil County Chairman, presented a proposal she had developed for subtracting from the growth allocation.

A motion was made and seconded that Cecil County Program be approved provided that the County delete from its Program Section 2.D. Computing Use of the Growth Allocation, Table 2.1, references to Table 2.5 Special Allocation, Table 2.5 (Special Growth Allocation), and the April 16, 1988 Proposed Method Of Subtracting Growth Allocation, and substitute Secretary Lieder's proposed language.

Discussion of the motion ensued. Mr. Osborne asked Mr. Pugh what his opinion was. Mr. Pugh answered that he was reluctant to give an opinion as he had not previously seen Secretary Lieder's proposal.

A call for the question was then made, and a vote taken with 10 in favor, 11 opposed, and no abstentions.

A motion was made and seconded that the Commission approve an amendment to the local Critical Area Program for Cecil County; that the County be authorized to operate its growth allocation accounting system for a period of one year to include not more than 70 acres of its growth allotment. At the end of the one-year period, the County be required to report to the Commission the accounting for its use of growth allocation, and that the

Commission then has the right to consult with the County, and after an appropriate consideration and vote of the Commission, if it feels that the growth allocation accounting is not correct, to direct Cecil County to comply with the counting guidelines of the Commission, or with any amendment that may have subsequently been adopted. This motion is intended to incorporate the Cecil County Program Amendment on the Growth Allocation process drafted by the County, Commission staff, and Mr. Epstein.

A discussion ensued regarding the motion. A call for the question was made and a vote was taken with 14 in favor, 7 opposed, and one abstention.

A motion was then made and seconded to approve the local Critical Area Program for Cecil County as amended, subject to the fact that there are two disputed mapping areas which will be marked RCA and will have a further hearing before the Commission as soon as possible, on the question deciding whether such a designation should continue. The motion was approved unanimously.

Chairman Liss then asked Dr. Sullivan to report on the status of the Town of Perryville. Dr. Sullivan reported that all of the proposed changes of the Commission staff to the Program have been made. A hearing on the changes has been held. The Town's proposed Buffer exemption areas were reviewed and found to be acceptable. There are no outstanding mapping issues.

Mr. Miller, Panel Chairman, said that he thought the Program an excellent one.

A motion was made and seconded to approve the local Critical Area Program for the Town of Perryville, as changed. All were in favor, 22:0.

Chairman Liss then asked Dr. Sullivan to summarize the Program for the Town of North East.

A motion was made and seconded to approve the local Critical Area Program for the Town of North East, as changed. The vote was 20 in favor with the abstention of Ms. Langner who holds property in the Town.

Mr. Miller, Panel Chairman, gave a briefing of the Program for the Town of Port Deposit.

A motion was made and seconded to approve the local Critical Area Program for the Town of Port Deposit, as changed. The vote was 22:0 in favor.

Mr. Butanis Panel Chairman, was asked to give a report on the Program for the Town of Charlestown. A motion was made and seconded to approve the local Critical Area Program for the Town of Charlestown, as changed. The vote was 22:0 in favor.

Chairman Liss asked Dr. Sullivan to report on the status of the Town of Easton's Program. Dr. Sullivan read a letter received from the Town, to the Commission, advising of the formal submittal of the Town Program as an alternative Program in lieu of the local Critical Area Program which is in the process of being formulated by the Critical Area Commission. Dr. Sullivan said that the Program is now ready for approval.

A motion was made and seconded that the local Critical Area Program of the Town of Easton be approved as changed and submitted, and that the Town be required to implement its Program. The vote was 21:0 in favor.

Dr. Sullivan then reported on the status of Chesapeake City. Dr. Sullivan said that he has reviewed the Town Program, and that basically the comments are essentially the same as those of the Commission staff on the other Cecil County Towns. Comments were provided to the Cecil County Planning Office. He suggested that the Program be returned to the Town for changes, as the Town will be able to immediately hold a hearing on those changes, and have the Program implemented by June.

A motion was made and seconded that the local Critical Area Program for the Town of Chesapeake City be returned to the Town for changes. The vote was 21:0 in favor.

Chairman Liss then asked Mr. Charles Davis to report on the status of Queen Anne's County's Program. Mr. Davis said that the Panel has met with the County Commissioners to discuss certain issues, including mapping. He said that revisions are being made to the Program, and that the County had held a public hearing on the 17th of May. Mr. Davis said that the Program should soon be ready for resubmittal.

Deputy Secretary Cade asked what the Commission's action should be at this point? Chairman Liss answered that if the County can submit the Program to the Commission, and the Commission staff, after review, accepts it, then a hearing can be scheduled on the two mapping issues.

Chairman Liss asked Dr. Taylor to announce the upcoming Commission hearings. Dr. Taylor said that the hearings for Caroline County, and the Town of Snow Hill will continue as scheduled, but the hearing for Talbot County scheduled for May 25th needed to be cancelled by the County. The County expects to be ready to reschedule for June. The Panel comprises Wally Miller, Ron Adkins, Sam Bowling, Ron Hickernell, and Bob Price in possible place of Shepard Krech.

Chairman Liss asked Mr. Epstein and Mr. Davis to discuss Langford Farms. Mr. Epstein explained the request of the Planning Director for Kent County, Ms. Gail Owens, to the Commission, for guidance, and asked Mr. Davis to give detail.

Mr. Bowling asked whether the Critical Area Law allows a property owner to request to have an entire farm instead of one-half of it in the Critical Area? Mr. Epstein answered affirmatively, if it is allowed by the County. Mr. Davis added that the Law itself, allows any jurisdiction to propose additional lands beyond the initial 1,000' planning area.

Mr. Davis then read the proposed response of the Commission that addresses Ms. Owen's concerns, and discussion ensued. The Commission agreed that the letter should be forwarded.

Chairman Liss asked Mr. Ren Serey to give an update on the Program for Chesapeake Beach. Mr. Serey said that the Town has made almost all of the requested changes to the Program and Zoning Ordinance. One of the remaining mapping issues involves a 73-acre parcel in the center of Town. The Town requests that that parcel be designated LDA, but the Panel feels should be RCA. The Town is now developing a proposal for exclusion for approximately 1/3 of the area which includes this parcel.

Mr. Price asked how much growth allocation the Town has? Mr. Serey answered that the Town has no growth allocation. Because the County's Program has not yet been approved, it is not certain how much growth allocation, if any, will be given to the Town.

Chairman Liss asked Mr. Frank Raley to introduce Mr. Ford Dean, Chairman of the St. Mary's Citizen's Task Force. Mr. Dean presented key issues of the Program for St. Mary's County, such as Mapping, prior project approval, grandfathering, and the 5% growth allocation.

Critical Area Commission  
Minutes - 5/18/88  
Page Six

Chairman Liss asked what the status is of the Program and the mapping? Mr. Dean answered that the Task Force has completed the review and added items omitted from the original Program. The mapping has been completed, but the County will not meet the June 11th deadline.

Chairman Liss suggested that at the next Commission Meeting, a vote should be taken to assume development of the St. Mary's County Program. Mr. Dean agreed that that would be the proper procedure, and that the County will submit its revised Program to the Commission as soon as possible.

#### UNDER NEW BUSINESS

Dr. Taylor reported that there is another project to be reviewed by the Commission's Marine Project Review Panel, at Susquehanna State Park called the Lapidum Boat Ramp. The Panel that will be meeting on this matter comprises of Skip Zahniser, Chairman, Bob Schoeplein, Jim Gutman, Kay Langner, and Chairman Liss.

There being no further business, the Meeting was adjourned.

RESOLUTION

WHEREAS, the Town of \_\_\_\_\_ has a total population of \_\_\_\_\_, has no planning and zoning functions, has no central water or sewer systems, and has faced little or no growth or development for many years; and

WHEREAS, the Town of \_\_\_\_\_ does apply to the Chesapeake Bay Critical Area Commission for the exclusion of th Town from Critical Area coverage; and

WHEREAS, the Town currently has no planning or zoning of its own, or other local laws and restrictions which might serve to protect water quality or conserve fish, wildlife or plant habitats from adverse impacts or development in the excluded area;

THEREFORE, BE IT RESOLVED, that the Town of \_\_\_\_\_, upon any proposal for development, will seek to make such development comply insofar as possible with the objectives, policies, and requirements of the Dorchester County Critical Area Program as approved or promulgated by the Chesapeake Bay Critical Area Commission and if any such annexation occurs such property shall conform to the Dorchester County Critical Area Program.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



*file w/  
Commis  
nty.  
of 6/1/88*

# Washington Brick & Terra Cotta Company

(A Limited Partnership)

888 Seventeenth Street, N.W., Washington, D. C. 20006 • Telephone (202) 298-6161

May 23, 1988

Chesapeake Bay Critical Area Commission  
Department of Natural Resources  
Tawes State Office D-4  
Annapolis, MD 21401

Re: Queen Anne's County  
Critical Area Program

Dear Commissioners:

The Washington Brick & Terra Cotta Company is seeking permission to construct an inn and golf course complex on approximately 400 acres of its 735-acre farm which lies to the west and adjacent to the Town of Queenstown. We have owned this property for more than 17 years.

There are two central questions before the Critical Area Commission which must be resolved in this connection:

1. Is this golf course a use which may be permitted in the RCA portion of this site?
2. Will the Critical Area Commission approve Queen Anne's County's allocation to Queenstown of 40 acres of LDA growth allocation for this project?

We feel strongly that the golf course proposed for this location is a proper use and is consistent with the letter and spirit of the Critical Area law. In the first place there is precedent in Maryland for golf courses in RCA land. Two golf courses which were in existence when the legislation was passed, Rocky Point Park and Sparrows Point Country Club in Baltimore County, have subsequently been mapped and approved as RCA by the Commission.

May 23, 1988

More importantly, the proposed golf course is totally consistent with the fundamental and basic purpose of the Critical Area law which is plainly stated in the law itself as ". . .fostering more sensitive development activity for certain shoreline activity areas so as to minimize damage to water quality and natural habitats;" (emphasis supplied) (Attachment "A")

In a report entitled "Environmental Impact of Turf Management Practices Associated with the Proposed Queenstown Inn Golf Course", (Attachment "B") prepared by Dr. Mark S. Welterlen, a professor of agronomy at the University of Maryland, the conclusion is unequivocally reached that this golf course would result in an improvement of the quality of the water emanating from the site over that of its current use as a farm.

The report summarizes the reasons for this as follows:

"- Approval of the golf course project would be consistent with the goals of the Critical Area Commission. An improvement in the quality of water emanating from the site would result from conversion of the site from its current farm usage to a golf course.

"- The stabilizing effects of turf would reduce phosphorus laden sediment movement from the site into adjacent waterways. Grasses are currently recommended by the Cooperative Extension Service as vegetative buffers around cropland adjacent to the Chesapeake Bay and its tributaries.

"- Based on the sandy nature of soils on the site, application of soluble nitrogen fertilizers and high solubility pesticides pose potential contamination of ground water. Current use of the site for corn and soybean production includes the use of soluble N fertilizers as well as carbofuron, which is a highly toxic insecticide which has only a moderate degree of adsorption to soil particles. Pesticides intended for use on the proposed golf course have been selected for their low toxicity and high soil adsorptive characteristics.

"- Use of the site as a golf course would reduce the acreage of land on the site which receives fertilizer and pesticide applications ([18-hole] golf course - 45.5A; farm - 245 acres). Area designated as roughs comprise the majority of the acreage on a golf course, and roughs generally do not receive fertilizer and pesticide applications. Land used for corn and soybean production receive uniform fertilizer and pesticide treatments over the entire cultivated areas.

"- Use of highly toxic materials would be eliminated with the use of the site as a golf course....

May 23, 1988

"- Fertilizer application on the site would be reduced by a factor of 7 for nitrogen, 6.5 for phosphorus and 17.3 for potassium if the golf course was developed on My Lord's Gift Farm site, thus reducing the threat to submerged aquatic vegetation through potential eutrophication.

"- A storm water management plan will be developed on the proposed golf course whereby storm water will be directed to ponds to be used for golf course irrigation. No stormwater management plans have been developed for the farm.

"- Sewage effluent from the Queenstown sewage treatment plant will be used for irrigation on the golf course, thus eliminating direct deposit of effluent into Queentown Creek."

Improved water quality is the first major stated objective of the Critical Area law. The second is to minimize damage to natural habitat. Here again, Dr. Welterlen's report is helpful inasmuch as he points out that an 18-hole golf course has approximately 45 acres of tees, fairways and greens. That is all. All the rest of the golf course is to be left to rough and open space, and will thus be brought into excellent wildlife habitat from its present low-habitat use as fields cleared for farming.

Both Queen Anne's County and the Town of Queenstown have noted their interest in pursuing the proposed project as is evidenced by the letter-form intergovernmental agreement dated May 2, 1988. (Attachment C). As described in Queen Anne's County's Critical Area Program at page I-27, Queenstown and Queen Anne's County have agreed that if Queenstown elects to annex the portion of the Farm involved in the Project, Queenstown will receive 40 acres of Queen Anne's County's growth allocation for the project for the purpose of converting RCA land to LDA land. The Inn and golf center, together will occupy a small part of the property, designated on map 51 for the growth allocation. Both the County and the Town believe that 40 acres is ample growth allocation for the entire project.

The calculation of the necessary amount of growth allocation is related to the conclusion that the golf course portion of the project that is to be located in the Critical Area can and will be constructed, used and maintained in a manner consistent with the RCA guidelines. Limited amounts of vegetation disturbance will be thoroughly mitigated. New habitat will be created. Surface runoff will be captured by creating on-site ponds designed to take advantage of existing drainage patterns. This will constitute a significant water quality improvement over the

May 23, 1988

current agricultural use which allows sediment and chemicals to run into Little Queenstown Creek and the Chester River. Currently, Queenstown discharges its more than 70,000 gallons per day of treated sewage directly into Little Queenstown Creek. Even if thoroughly treated, this discharge of fresh water containing residual nutrients is a pollutant of the natural saline environment of the Creek. We have agreed to work with Queenstown to take the treated effluent, store it as necessary and use it for spray irrigation on the golf course, thus sparing the Creek this daily infusion of waste water.

This project depends on the adequacy of the proposed 40-acre growth allocation. Washington Brick, Queenstown and Queen Anne's County need to expend substantial resources in planning for and developing this project and it would be to no one's benefit for the Commission to reject the growth allocation concept at a later date. I encourage your approval of the Critical Area Program as submitted by Queen Anne's County, and specifically the proposed use of 40 acres of Growth Allocation for the project.

I would be pleased to answer any questions or provide any additional information you may request.

Very truly yours,



Arthur A. Birney  
Managing Partner

cc: Commissioners of Queen Anne's County  
Mr. Barry Perkel

## Critical Area Law — Subtitle 18

### §8-1801, Declaration of public policy.

(a) *Findings.*—The General Assembly finds and declares that:

(1) The Chesapeake Bay and its tributaries are natural resources of great significance to the State and the nation;

(2) The shoreline and adjacent lands constitute a valuable, fragile, and sensitive part of this estuarine system, where human activity can have a particularly immediate and adverse impact on water quality and natural habitats;

(3) The capacity of these shoreline and adjacent lands to withstand the continuing demands upon them, without further degradation to water quality and natural habitats is limited;

(4) National studies have documented that the quality and productivity of the waters of the Chesapeake Bay and its tributaries have declined due to the cumulative effects of human activity that have caused increased levels of pollutants, nutrients, and toxics in the Bay System and declines in more protective land uses such as forestland and agricultural land in the Bay region;

(5) Those portions of the Chesapeake Bay and its tributaries within Maryland are particularly stressed by the continuing population growth and development activity concentrated in the Baltimore-Washington metropolitan corridor;

(6) The quality of life for the citizens of Maryland is enhanced through the

restoration of the quality and productivity of the waters of the Chesapeake Bay and its tributaries;

(7) The restoration of the Chesapeake Bay and its tributaries is dependent, in part, on minimizing further adverse impacts to the water quality and natural habitats of the shoreline and adjacent lands;

(8) The cumulative impact of current development is inimical to these purposes; and

(9) There is a critical and substantial State interest for the benefit of current and future generations in fostering more sensitive development activity in a consistent and uniform manner along shoreline areas of the Chesapeake Bay and its tributaries so as to minimize damage to water quality and natural habitats.

(b) *Purposes.*—It is therefore the purpose of the General Assembly in enacting this subtitle to:

(1) Establish a Resource Protection Program for the Chesapeake Bay and its tributaries by fostering more sensitive development activity for certain shoreline areas so as to minimize damage to water quality and natural habitats; and

(2) Implement the Resource Protection Program on a cooperative basis between the State and affected local governments, with local governments establishing and implementing their programs in a consistent and uniform manner subject to State criteria and oversight. (1984, ch. 794.)

me  
tic  
apl  
apl  
pla  
zor  
exc  
anc  
doc  
(  
an.  
—  
§§  
B  
C  
al  
ar  
(  
Ch  
sior  
(  
Sec  
—  
§§  
of  
(  
sist  
app  
(  
wit  
wh

ATTACHMENT "B"

2210 Pecan Lane  
Bowie, Maryland 20617  
301-454-3715

May 13, 1988

Mr. Arthur A. Birney  
Washington Brick and Terra Cotta Company  
888 Seventeenth Street, N. W.  
Washington, D. C. 20006

Dear Mr. Birney:

Enclosed is an assessment of environmental impact of turf management practices involved in maintenance of the proposed Queenstown Inn golf course. The report includes probable fertilizer and pesticide inputs to the proposed golf course, potential for environmental contamination resulting from turf management practices and ways to reduce such hazards. Considering the topography of the site, proposed pesticide and fertilizer use and the positive environmental effects of turfgrass, the potential for adverse effects on the local environment should be reduced by the golf course development in comparison to the current use of the property as farmland.

For the sake of testimony, I am an Assistant Professor of Agronomy in the Department of Agronomy of the University of Maryland in College Park, Maryland. My areas of responsibility include research in and the teaching of turfgrass ecology and management.

I have an Associate of Science degree in Turfgrass Management from Essex Agricultural and Technical Institute, Hathorne, Massachusetts; a Bachelor of Science degree in Plant and Soil Science from the University of Rhode Island, Kingston, Rhode Island; and Master of Science and Doctor of Philosophy degrees in Agronomy from The Pennsylvania State University, University Park, Pennsylvania.

I have practical experience in turfgrass management having worked on a golf course for 10 years in Lunenburg, Massachusetts. I also have a background in turfgrass research having worked at the University of Rhode Island Turfgrass Research Facility and at the Pennsylvania State University Valentine Turfgrass Research Center.

In 1982, I joined the faculty of the University of Maryland where I have worked as coordinator of the University of Maryland Turfgrass Research and Education Facility in Silver Spring, Maryland. I have also been chairman of two federally funded regional research projects for the Northeast: NE-139, Efficient Turfgrass Culture With Limited Inputs of Water and Energy; NE-169, Integrated Turfgrass Management for Environmental Enhancement and Resource Conservation.

In addition to my work with the University of Maryland, I have consulted with several golf course architects, managers and developers

on the environmental impact of turfgrass management practices. I have also acted as an expert witness for the U. S. Environmental Protection Agency.

If you need further assistance on this project please feel free to contact me.

Sincerely,

*Mark S. Welterlen*

Mark S. Welterlen, Ph.D.  
Turfgrass Ecologist

ENVIRONMENTAL IMPACT OF TURF MANAGEMENT PRACTICES  
ASSOCIATED WITH THE PROPOSED  
QUEENSTOWN INN GOLF COURSE

Mark S. Welterlen, Ph.D.  
May 13, 1988

I. Executive Summary

Based on the environmental aspects of this project, a recommendation is made to approve the proposed Queenstown Inn Golf Course in Queenstown, Maryland. The evaluation for the potential for water quality impacts from the proposed Queenstown Inn Golf Course resulted in the following conclusions:

- Approval of the golf course project would be consistent with the goals of the Critical Area Commission. An improvement in the quality of water emanating from the site would result from conversion of the site from its current farm usage to a golf course.
- The stabilizing effects of turf would reduce phosphorus laden sediment movement from the site into adjacent waterways. Grasses are currently recommended by the Cooperative Extension Service as vegetative buffers around cropland adjacent to the Chesapeake Bay and its tributaries.
- Based on the sandy nature of soils on the site, application of soluble nitrogen fertilizers and high solubility pesticides pose potential contamination of ground water. Current use of the site for corn and soybean production includes the use of soluble N fertilizers as well as carbofuron, which is a highly toxic insecticide which has only a moderate degree of adsorption to soil particles. Pesticides intended for use on the proposed golf course have been selected for their low toxicity and high soil adsorptive characteristics.
- Use of the site as a golf course would reduce the acreage of land on the site which receives fertilizer and pesticide applications (golf course - 45.5A; farm - 245 acres). Areas designated as roughs comprise the majority of the acreage on a golf course, and roughs generally do not receive fertilizer and pesticide applications. Land used for corn and soybean production receive uniform fertilizer and pesticide treatments over the entire cultivated areas.
- Use of highly toxic materials would be eliminated with the use of the site as a golf course. Pesticides currently used for crop production on the site include toxicity Class I (LD50 up to and including 50 mg/kg, i.e. carbofuron) materials, whereas all pesticides intended for use on the golf course include materials that fall within toxicity Class III (LD50 from 500 to 5,000 mg/kg) and toxicity Class IV (LD50 greater than 5,000 mg/kg) with the

exception of chlorpyrifos, an insecticide that falls into toxicity Class II (LD50 50 to 500 mg/kg).

- Fertilizer application on the site would be <sup>for potassium</sup> reduced by a factor of 7 for nitrogen, 6.5 for phosphorus and 17.3 if the golf course was developed on My Lord's Gift Farm site, thus reducing the threat to submerged aquatic vegetation through potential eutrophication.
- A storm water management plan will be developed on the proposed golf course whereby storm water will be directed to ponds to be used for golf course irrigation. No stormwater management plans have been developed for the farm.
- Sewage effluent from the Queenstown sewage treatment plant will be used for irrigation on the golf course, thus eliminating direct deposit of effluent into Queenstown Creek.

## II. Turfgrass Characteristics and Management

### A. Characteristics and Management of Golf Course Greens

The golf course putting green is the most aesthetically pleasing and also the most cultured turf area on a golf course. The game of golf requires that the green provide a uniform, resilient surface on which to putt. Golf greens have an important impact on the game, since 1/3 to 1/2 of all golf shots occur on the greens. Consequently, the condition of the green is critical to the game of golf, and if the golf course is to remain practically usable the greens must be maintained to peak performance at all times. Although golf greens receive the highest management intensity per unit area only a small portion of the course is devoted to greens. Typical acreage of greens on an 18 hole golf course comprising 125 acres is approximately 4 acres (3.2% of the total golf course acreage).

Creeping bentgrass (Agrostis palustris Huds.) is the predominant turfgrass species used on golf course putting greens in the United States. Turfgrasses selected for putting greens must possess several special characteristics including a) tolerance to very close mowing of 0.2 inch, b) very high shoot density, c) fine leaf texture, d) uniformity, e) creeping growth habit, f) freedom from excessive grain and thatch, and g) good recuperative potential.

Creeping bentgrass conforms to these criteria quite well; however, because of the stressful conditions under which it is grown (extremely low cutting heights and concentrated foot traffic) pest problems are often exacerbated. Since most of these pests can cause severe damage to greens in a relatively short period of time, virtually all but the lowest budgeted golf courses apply fungicides and herbicides on a preventative basis to preclude potential problems. Insecticides are applied on a curative basis as needed. Pesticides typically used on golf greens in the Maryland area are listed in Table 1.

In order to provide adequate recuperative potential to the turf and maintain good color, fertilizers are periodically applied. Of the three primary essential elements of turfgrass nutrition (nitrogen, N, phosphorus, P, and potassium, K), turfgrass has the highest requirement for nitrogen. In addition, more nitrogen is used on golf greens and tees in comparison to fairways or roughs because of (1) inherently higher N requirements of creeping bentgrass used on greens in comparison to Kentucky bluegrass (Poa Pratensis L.) or perennial ryegrass (Lolium perenne L.) used on fairways and tall fescue (Festuca arundinacea Schreb.) which is used on roughs, (2) increased growth and recuperative potential on greens and tees due to stressful conditions brought on by low mowing and intense pedestrian traffic, and (3) removal of nutrient containing clippings from tees and greens (clippings are normally returned on fairways and roughs because they do not interfere with play).

Phosphorus is important for root growth of turfgrass and is especially needed during establishment. Mature turfgrass has a much lower requirement for phosphorus than seedling turf. In addition, excessive phosphorus can often be detrimental to turf, since annual bluegrass, a pernicious and difficult to control weed of turfgrass, is encouraged by phosphorus. Potassium is used for increasing environmental stress tolerance, disease resistance and general vigor of turfgrass. Potassium is second only to nitrogen in the amounts required to sustain turfgrass growth.

#### B. Characteristics and Management of Golf Course Tees

The golf tee is second to greens in the level of management intensity imposed. The golf course tee like the golf green receives a considerable amount of concentrated foot traffic and is subject to considerable stress. Consequently, tees must be managed intensively in order to maintain a permanent playing surface. The characteristics required for good playability of a golf tee include (a) smoothness, (b) firmness, (c) high density, (d) uniformity, (e) resiliency and (f) ability to withstand close mowing. A smooth, firm and resilient surface is required so that golfers can achieve a balanced, firm stance. Tees are maintained at mowing heights (0.5-0.75 in.) intermediate between golf greens and fairways, and because of this point there is a broader range of species which are suitable for use on tees in comparison to greens. In Maryland, creeping bentgrass, Kentucky bluegrass and perennial ryegrass are predominantly used for golf tees. Tees generally comprise about 1.5 acres (1.2%) of a typical 18 hole golf course.

#### C. Characteristics and Management of Fairways

The golf course fairway follows golf greens and tees in terms of required management intensity. Fairways comprise about 40 acres (32%) of a typical 18 hole golf course. Fairways are maintained at a higher cutting height (0.75-1.3 in.) than tees or greens and are

subjected to a much lower degree of concentrated foot traffic. Creeping bentgrass, Kentucky bluegrass, perennial ryegrass and zoysiagrass are suitable turfgrass species for golf course fairways in Maryland. Management intensity varies depending on the species selected: (creeping bentgrass > Kentucky bluegrass or perennial ryegrass > zoysiagrass, see Tables 2, 3 and 4).

#### D. Characteristics and Management of Roughs

Roughs are located on the borders of the golf course proper and are maintained so as to penalize the golfer whose shots stray from the fairway. Consequently, roughs are typically maintained at a higher cutting height (2-4 in.) and receive minimal maintenance in terms of pesticide and fertilizer applications.

Turfgrass species and cultivars used on roughs must possess certain unique characteristics including (a) adaptation to a 2-4 inch cutting height, (b) relatively low fertility requirement (c) good resistance to drought stress diseases and insects, and (d) ability to stabilize soils from wind and water erosion. Suitable turfgrasses include tall fescue and proven, low maintenance requiring Kentucky bluegrasses. Roughs typically make up the largest portion of turf on a golf course.

#### III. Proposed Pesticide and Fertilizer Usage

Annual pesticide and fertilizer usage on the proposed Queenstown Inn Golf Course is anticipated to be as shown in Table 4. Calculations were based on 40 acres of fairways, 4 acres of greens and 1.5 acres of tees. For comparison purposes of pesticide toxicity, the oral LD<sub>50</sub> for common aspirin is 1200 mg/kg.

Two points should be emphasized. First, the types and amounts of pesticide and fertilizer required may vary somewhat depending on (a) the species selected (b) climatic conditions affecting pest populations and turfgrass growth response in a particular year, (c) introduction of new turfgrass pests which are not currently a problem, and (d) introduction of new pesticides and fertilizer products. Because of the sensitive area which is proposed for the golf course, extensive and careful evaluation of the environmental effects of new products should be observed. Fortunately, all new pesticides must pass increasingly extensive testing through the U.S. Environmental Protection Agency before registration. Secondly, pesticides listed are general use pesticides and are not restricted, i.e. all materials can be purchased by a homeowner for personal application to his or her home lawn. Restricted use pesticides are infrequently needed or used in golf course management. Roughs should not require application of pesticides or fertilizer, and as a result they are not included in Table 4.

#### IV. Potential for Reduction of Fertilizer and Pesticide Use on the Golf Course

The programs outlined for fertilizer and pesticide use on golf course greens, tees, and fairways represent typical useage of these materials in Maryland. The potential for reducing their load is minimal, whereas the potential for minimizing and eliminating their impact on water quality is great.

To reduce the pesticide and fertilizer load beyond what is typically used, several avenues may be taken, although only minimal reductions are likely to be achieved.

1. Use pesticides on a curative rather than a preventative basis. A reduction in total pesticide use may occur, but a reduction in turf quality can result if the turf manager is inexperienced.
2. Use of biological agents such as parasitic nematodes, endophytic grasses and bacterial spore formulations rather than insecticides. Again, effectiveness may be reduced.
3. During establishment of the golf course, selection of cultivars of turfgrass which have been shown to be adapted to prevalent climatic conditions, and which have improved pest and drought resistance can substantially reduce the need for pesticide use.
4. By hiring an experienced golf course superintendent of proven ability, more economical and efficacious use of fertilizers and pesticides will likely be made. Such a person will have a greater knowledge of sound agronomic practices which, in turn, will reduce pest problems and the need for pesticide applications, and will have a better idea of whether or not a developing pest problem needs to be treated.

To further minimize or eliminate the potential impact of pesticides and fertilizers on water quality, several steps may be taken:

1. Use drought resistant cultivars with reduced irrigation needs, which could result in slight runoff reductions of pesticides or fertilizers with irrigation water.
2. Use slow release fertilizers, which are less likely to leach than soluble fertilizers.
3. Follow recommended application methods for pesticides carefully, especially in regard to wind conditions. Such practices include the use of spray nozzles providing larger droplet size to minimize drift, operating sprayers within recommended pressure ranges, and use of drift control spray additives.

4. Design areas immediately adjacent to water bodies as minimal or no maintenance areas, reducing the need for any pesticide or fertilizer applications.
5. Again, hire an experienced golf course superintendent of proven ability who is a licensed pesticide applicator and who will oversee all pesticide applications.

#### V. Potential for Fertilizer and Pesticide Contamination

The potential for fertilizer and pesticide contamination of the Chester River, Queenstown Creek and Town Creek as a result of turf management practices at the proposed golf course site is a function of site characteristics (including soil type, slope, vegetation), types or amounts of fertilizer and pesticides used and weather conditions.

##### A. Soil Description

The predominant soils of the proposed golf course site are of the Othello, Mattapex, and Sassafras series (SCS, 1966) (Table 5). Also included on the site are pockets of soil of the Woodstown, Galestown and Mattapeake series as well as areas of tidal marsh and mixed alluvial soils. The site is relatively level, with slopes generally in the range of 0 to 5%. The steepest slopes on the site are in the 10 to 15% range.

The Othello series consists of poorly drained soils that developed in silty deposits underlain by beds of sandy material. In cultivated areas which occur on the site, these soils have a plow layer of dark, grayish-brown, crumbly loam or silt loam. The subsoil is light silt clay loam to a depth of 29 inches. The subsoil is weakly platy in the lower part and is sticky and plastic. Below the subsoil is a thin transitional layer of compact, sandy loam. The transitional layer is underlain by substratum of loose loamy sand.

Othello soils are very acidic unless limed. Othello soils are not as well drained as Matapeake or Mattapex soils, but they are better drained than Portsmouth soils. Othello, Mattapex, Matapeake and Portsmouth soils have all developed in the same kind of silty mantle. Othello soils are extensive in Queen Annes County and are not difficult to drain. Artificial drainage would be necessary for Othello soils on the site. Erosion of Othello silt loam with 0 to 2 percent slope (ObA) is only a slight hazard in worst cases.

Mattapex series are moderately well drained soils that developed in silty material underlain by a sandy substratum. The plow layer of Mattapex series soils is crumbly, fine, sandy loam, loam or silt loam. The upper part of the subsoil is thin and consists of slightly sticky, heavy loam. The middle portion of the subsoil is light, silty clay loam that is fairly firm, plastic and sticky. Between the depths of 26 and 36 inches, the subsoil is slightly

Table 5. Soils Present on the Proposed Queenstown Inn Golf Course Site.

Major Soils

ObA	Othello silt loam, 0-2% slope
MsA	Mattapex loam, 0-2% slope
MsB2	Mattapex loam, 2-5% slope, moderately eroded
SfB2	Sassafras sandy loam, 2-5% slope, moderately eroded
Tm	Tidal Marsh

Other Soils

GaB	Galestown loamy sand, clayey substratum, 0-5% slope
GaD	Galestown loamy sand, clayey substratum, 5-10% slope
GkD	Galestown and Lakeland loamy sand, 10-15% slope
McB2	Mattapeake loam, 2-5% slope, moderately eroded
M+A	Mattapex silt loam, 0-2% slope
M+B2	Mattapex silt loam, 2-5% slope, moderately eroded
M+C2	Mattapex silt loam, 5-10% slope, moderately eroded
MxD	Mattapex soils, 10-15% slope
My	Mixed alluvial
SfC3	Sassafras sandy loam, 5-10% slope, severely eroded
SfD2	Sassafras sandy loam, 10-15% slope, moderately eroded
WoA	Woodstown sandy loam, 0-2% slope
WoB2	Woodstown sandy loam, 2-5% slope, moderately eroded
WoD	Woodstown sandy loam, 10-15% slope

platy, firm sticky and plastic. A very sandy substratum lies below the subsoil. Mattapex soils are strongly acid except when limed. Soil tends to be wet through most of the winter and early spring. Soils of the Mattapex series located on the site should be provided with artificial drainage.

Soils of the Sassafras series are deep, well drained soils that developed on uplands in deposits of sand, silt and clay. These soils are characterized by a sandy or loamy surface layer and a sandy clay loam subsoil. Sassafras soils are normally strongly acid unless limed. Sassafras sandy loam with 2 to 5 percent slopes that are moderately eroded (SfB2) are well drained and holds moisture and plant nutrients well. Erosion may be a problem in cultivated areas, and turf cover is recommended (SCS, 1966).

Tidal Marsh (Tm) is located in several locations on the water's edge of the site. Soil is high in salts and contains a fairly large amount of sulfur compounds. Reclamation of tidal marsh yields oxidized sulfur products that are normally toxic to plants and may disrupt wildlife habitat. Consequently, such areas would be unsuitable for turf, even if reclamation were permitted.

A description of other soils found on the site is included in Appendix I.

#### B. Golf Course Turf Versus Current Land Use

My Lord's Gift Farm is the site proposed for the Queenstown Inn Golf Course. The farm includes 245 acres of tillable land that is used for production of corn, soybeans and small grains. The proposed golf course will comprise approximately 120 acres, with 40 acres of fairways, 1.5 acres of tees and 4 acres of greens which will receive applications of fertilizers and pesticides. All of the 245 acres of the farm currently receive applications of fertilizers and pesticides. Consequently, the development of a golf course on the site will result in an approximately two-fold decrease in the amount of land receiving fertilizers and pesticide applications.

Development of a golf course on the site will further reduce the potential for pesticide, fertilizer and sediment contamination of waterways surrounding the site as a result of the near complete soil coverage afforded by turf and the extensive shallow root system of turfgrass. 85% of the extensive, fibrous root system of turfgrass generally lies within the top 2 inches of soil, providing an effective and efficient means of nutrient utilization thus reducing the possibility of nutrient leaching and ground water contamination.

Soybeans and corn are planted as row crops, and, as such, a considerable amount of soil is uncovered by vegetation and exposed to potential eroding elements. Furthermore, soil used for soybeans and corn remains exposed and subject to erosion after harvesting. The significant amount of exposed, unstable soil and the long duration between crop harvest makes the site conducive to erosion especially on areas comprised of Sassafras series soils.

Research conducted by the University of Maryland (Gross, et. al. 1987) at the Chesapeake Bay Foundation Research Farm in Upper Marlboro, Maryland showed that surface water runoff volume, sediment loss, total N movement and phosphate movement were dramatically lower in turf in comparison to conventional tobacco (Table 6) under natural rainfall. Under simulated rainfall intensities, turf was shown to be superior than corn in terms of stabilizing soil (Table 7). With an intense rainfall occurrence of 4.7 inches per hour, turf was 133 times more effective in stabilizing soil in comparison to corn.

The Cooperative Extension Service in the Chesapeake Bay area currently recommends the planting of grass filter strips as well as natural vegetation filter areas for reducing runoff from field crops (Extension Services of the Chesapeake Basin, 1985). Numerous studies have shown that grass buffer strips are quite effective in reducing runoff and the sediment and nutrients which are carried with it (Hayes, et al., 1978; Tollner, et al., 1977; U.S. EPA, 1983a and 1983b; and Young, 1980).

In addition to the basic environmentally beneficial aspects of planting the site to turfgrass, plans have been proposed to utilize sewage effluent from Queenstown for irrigation on the golf course. The use of sewage effluent for turf irrigation is common in southwestern U.S. where water shortages often occur, and is accepted as an efficient means of filtering effluent water of potential contaminants.

Plans have also been proposed to develop a storm water management system on the site. No storm water management system is currently in effect on the farm site.

### C. Characteristics of Pesticides and Fertilizers

Water contamination, as a result of fertilizer and pesticide use on the proposed golf course, can be further minimized by proper choice and use of these materials as well as the use of turfgrass species with a low requirement for management input. The following is a description of pesticides<sup>1</sup> and fertilizers which could be used on the site to maintain golf course turf and which pose the least hazard to the local environment of the golf course site.

---

<sup>1</sup>Information used in this section obtained from (1) Weed Science Society of America. 1983. Herbicide handbook. Weed Science Society of America. Champaign, Illinois, and (2) Berg, G. L. (ed.) 1986. Farm Chemicals Handbook. Meister Publishing Co. Willoughby, Ohio.

Table 6. Comparison of tobacco versus tall fescue turf in surface movement of water, sediment and fertilizer (Gross, et al., 1987).

Crop	Runoff Volume	Sediment	Total-N	PO <sub>4</sub> -P
	L-10 <sup>3</sup> ha <sup>-1</sup>	- - - - -	kg ha <sup>-1</sup>	- - - - -
Conventional Tobacco	334.0	4730	11.7	0.42
Tall Fescue	74.5	5.8	0.11	0.03

Table 7. Sediment loss from corn versus tall fescue  
(Gross, et al. 1987).

<u>Rain Intensity</u>	<u>Sediment Loss</u>	
	<u>Tall Fescue Turf</u>	<u>Corn</u>
in. hr <sup>-1</sup>	- - - - - gm m <sup>-2</sup> min <sup>-1</sup> - - - - -	
4.7	0.18	24.0
4.3	0.12	14.1
3.7	0.08	10.0

\* Rainfall was imposed with a rainfall simulation device. Rainfall intensities of 4.7, 4.3, and 3.7 inches per hour correspond to rainfall events which occur every 20, 5 and 2 years, respectively.

Table 8. Pesticides and fertilizers currently used for crop production on My Lord's Gift Farm, their oral toxicities and total annual application amounts.<sup>1</sup>

Material	Acute Oral LD50 mg/kg	Rate* lb. a.i.
<u>Herbicides</u>		
butylate	3,500-5,431	555.6
atrazine	1,780	370.4
trifluralin	>10,000	185.2
imazaquin	5,000	30.6
glyphosate	4,300	spot treatment
<u>Insecticide</u>		
carbofuran	11	257.25
<u>Fertilizers</u>		
Nitrogen	-	45,080
Phosphorus	-	19,600
Potassium	-	52,675

<sup>1</sup>Based on information obtained from Mr. E. Greeves (farm manager); Farm Chemicals Handbook, 1988; WSSA, 1983.

\*LD50 is expressed as milligrams (mg) of pesticide ingested per kilogram (kg) of body weight of a test animal (mice, rats, rabbits, etc.). LD50 for a formulated product may be considerably higher (less toxic) than that for technical grade. The oral LD50 for common aspirin is 1200 mg/kg.

\*\*Annual amounts currently applied to field crops (corn, soybeans, small grains) on 245 tillable acres at the site. All materials are applied on an annual basis.

## Herbicides

- 1) Broadleaf Herbicides  
2,4-D  
MCPP

These are phenoxy-type herbicides with relatively low toxicity. They are readily adsorbed in black acid soil but may leach in very sandy soil, which is not the case for this site. Microbial breakdown occurs in warm, moist soil. Pure 2,4-D acid at 100 ppm caused slight mortality for fingerling bream and largemouth bass. However, because of its adsorptive characteristics in soil and use of buffer strips it is highly unlikely that such a high concentration would be introduced into the reservoir from the golf course. MCPP has a similar order of toxicity as 2,4-D. Dicamba and dichloprop are two other herbicides normally used to control broadleaf weeds in turf, but they should not be used on the proposed golf course because of problems related to mobility in the soil or toxicity to fish.

- 2) Pre-emergence Grassy Weed Herbicides  
bensulide  
oxadiazon  
pendimethalin

Pre-emergence herbicides are chemicals which are applied to the soil to control annual grassy weeds, such as crabgrass and goosegrass, before they emerge from the soil. These pesticides are designed to form a chemical barrier in the soil which is phytotoxic to germinating grass seed. As the young seedling grows and comes in contact with the treated zone it absorbs the material and dies. Both compounds are very stable in the soil and have low toxicity. Bensulide leaches very little in sand, clay or organic soils and is inactivated in soils containing high amounts of organic matter.

Microbial breakdown of bensulide occurs slowly in the soil. Toxicological studies have shown that 96-hr.  $LC_{50}$  of bensulide is 1 to 2 ppm for common goldfish and 0.72 ppm for rainbow trout. The 96-hr.  $EC_{50}$  (loss of equilibrium or death) of bensulide in brown shrimp (*P. azetucus*) is in excess of 1 ppm, which was the highest concentration tested. The 96-hr.  $EC_{50}$  (shell growth inhibition) of bensulide in the common oyster (*C. virginica*) is 0.45 ppm. The 48-hr. TL of bensulide in the juvenile estuarine species *L. xantrus* is 0.32 ppm. No effect was established at 10 ppm when bensulide was fed to Japanese quail over a 21 day period.

Oxaziaron is also relatively immobile in the soil and presents practically no risk to wildlife and fish. It is

strongly adsorbed by soil colloids and humus and very little migration or leaching occurs. Toxicological studies on wildlife and fish showed that the LD<sub>50</sub> is greater than 1000 mg/kg for mallard ducks and 6000 mg/kg for bobwhite quail, and the LC<sub>50</sub> is greater than 2 ppm for all fresh water fish tested.

LESCO Pre-M<sup>R</sup>, pendimethalin, is a pre-emergence herbicide used to control annual, grassy weeds such as crabgrass and goosegrass. Preemergence, annual-grassy-weed herbicides are generally used on an annual basis to prevent germination of weedy grasses. Two applications of pendimethalin at the rate of 1.5 lb. a.i./A, 6 to 8 weeks apart are usually necessary for season-long control of crabgrass and goosegrass in Maryland. Pendimethalin is applied to turf in April in Maryland and irrigated into the soil after application.

Pendimethalin presents no hazard to birds (Table 9) and mammals when used according to label directions; however, it may be toxic to fish if the material goes into solution in aquatic systems. The manufacturer reported 96 hr. TL<sub>50</sub> data for technical grade pendimethalin of 0.138 to 0.199 ppm for fish in clean water, i.e. no sediment or plants in water (Table 10). Soil adsorption of pendimethalin is strong, thus precluding leaching into adjacent waterways and also reducing the potential for solubility of the product in natural water bodies containing sediment. To further minimize the possibility of the movement of pendimethalin into surrounding water, I suggest prohibiting application of this material within 500 feet of the water's edge.

### 3) Post-emergence Grassy Weed Control

MSMA  
DSMA  
ethofumesate  
fenoxaprop-ethyl  
glyphosate  
bentazon

Presently, the only effective and available herbicides for post-emergence control of annual weedy grasses, such as crabgrass, goosegrass or annual bluegrass, are organic arsenicals, such as MSMA, DSMA, and ethofumesate and fenoxaprop-ethyl. MSMA and DSMA would only be used if pre-emergence herbicides were not applied or if they were ineffective in a particular year. An undesirable side effect of organic arsenical herbicides is that they can very easily injure desirable turfgrass species as well as undesirable annual weedy grasses. Consequently, these materials would be used very infrequently. The organic arsenicals are almost completely inactivated in soil by surface adsorption and ion

Table 9. Pendimethalin toxicity to avian species.<sup>1</sup>

Species	Toxicity	
	<u>LD<sub>50</sub> (Tech.)</u> mg/Kg.	<u>LC<sub>50</sub> (Tech. 8-day feeding)</u> ppm
Mallard Duck	1,421	10,388
Bobwhite Quail	-	4,187

<sup>1</sup>Personal communication, March 17, 1988, American Cyanamid Co.

Table 10. Pendimethalin toxicity to fish.<sup>1</sup>

Species	Toxicity <sup>2</sup>	
	96-hr TL <sub>50</sub> (Tech.Grade)	No Effect Level (Tech.Grade)
	----- ppm -----	
<u>Fish</u>		
Channel Catfish	0.199	0.1
Rainbow Trout	0.418	0.32

<sup>1</sup>Personal communication, March 27, 1988, American Cyanamid Co.

<sup>2</sup>Toxicity of technical grade pendimethalin to selected species in clean water.

exchange and have low toxicity. Humans must ingest between 1 oz to 1 lb active material before they begin to exhibit symptoms of toxicity. Because of the immobile nature of organic arsenicals in the soil and low toxicity they should be relatively safe to use on the proposed site.

Ethofumesate is a selective herbicide which can be used for annual bluegrass control in perennial ryegrass. Studies indicated that ethofumesate does not leach in soils containing more than 1% organic matter. Chemical analyses have shown that the herbicide does not leach below 6 inches in the soil. Microbial breakdown of ethofumesate is 90% within 14 weeks in wet warm weather. The toxicity of technical grade ethofumesate to wildlife and fish is as follows:

Rainbow trout	96 h LC <sub>50</sub>	< 180 ppm
Bluegill sunfish	96 h LC <sub>50</sub>	< 320 ppm
Bobwhite quail	Oral LD <sub>50</sub>	< 8743 mg/kg
Mallard duck	Oral LD <sub>50</sub>	< 3552 mg/kg

Another material which is quite effective in controlling crabgrass and goosegrass post-emergently is fenoxypop-ethyl which has been recently marketed as Acclaim<sup>®</sup> by the American Hoechst Corporation. Acclaim<sup>®</sup> is more selective on crabgrass and will not injure desirable turfgrass species when applied at label rates. Acclaim<sup>®</sup> would only be used as a spot treatment to control annual grassy weeds that were not controlled with pre-emergence herbicides. Consequently, use of this product would be on an "as needed" basis.

Fenoxaprop-ethyl was originally developed as an herbicide in rice production. Rice paddies often have fish in them, and because of their presence toxicological data on susceptibility of fish to the herbicide was especially important. The product met EPA standards for use on rice and has received registration for use on this crop. Table 8 includes toxicological data on fish and other wildlife. The data for fish is based on clean water with no sediment or plant material.

Fenoxaprop-ethyl is strongly adsorbed to soil and plant materials, both in aquatic and terrestrial environments. Because of the immobilization of the material at the point of application (land) and in natural aquatic systems which include sediment and plant material the potential for achieving lethal concentrations in water is unlikely. In addition, the rates and amounts of materials to be used at the proposed golf course site would further preclude the possibility of movement of the material to adjacent waterways. To avoid possible drift of sprayed material into the reservoir, I suggest prohibiting use of Acclaim<sup>®</sup> on areas within 500 feet from the water's edge.

Basagran<sup>®</sup>, bentazon, is an herbicide used to control yellow nutsedge (Cyperus esculentus L.) in turf. Basagran<sup>®</sup> is intended for post-emergence application, and one or two applications at the rate of 0.75lb a.i./A are recommended for nutsedge control. Yellow nutsedge generally occurs in isolated areas, therefore only spot treatment will be necessary.

Bentazon is not adsorbed to soil particles but is rapidly incorporated into soil organic matter by microorganisms, and, thus does not leach below the plow layer (WSSA, 1983). Persistence of bentazon when applied at label rates reaches undetectable levels within 6 weeks. Toxicological properties of bentazon with wildlife and fish are presented in Table 11.

Because of leaching and toxicological characteristics of bentazon and the fact that only spot treatment of this material will be made, I do not feel that this material poses any significant environmental hazard.

Roundup<sup>®</sup>, glyphosate, is a nonselective herbicide which is applied to vegetation in liquid form. Roundup<sup>®</sup> is used for nonselective control of vegetation necessary for renovation of turf areas and spot treatment where complete vegetation control is needed.

Glyphosate is strongly adsorbed to soils and is degraded microbially (WSSA, 1983). Glyphosate is relatively nonpersistent in soils and offers little or no preemergent activity. In fact, areas can be reseeded immediately after application without injuring seeded species.

Toxicological investigations conducted with bobwhite quail, mallard ducks, honey bees, rainbow trout, bluegills and other species of fish showed that these species have an extremely high tolerance to glyphosate (WSSA, 1983).

Based on high tolerance of glyphosate in wildlife, fish and mammals; adsorption and decomposition in soils; and spot treatment of the material, I do not feel that glyphosate poses any significant environmental hazard.

Insecticides  
chlorpyrifos  
trichlorfon  
carbaryl

Table 11. Toxicity of bentazon to fish and wildlife.<sup>1</sup>

Toxicity		
Species	Oral LD <sub>50</sub>	96-Hour LC <sub>50</sub>
Bluegill sunfish	-	616 <sup>2</sup>
Rainbow Trout	-	635 <sup>2</sup>
Mallard Duck	2,000 <sup>3</sup>	-
Japanese Quail	720 <sup>3</sup>	-
Bees	harmless to bees	

<sup>1</sup> WSSA, 1983

<sup>2</sup> Technical active material

<sup>3</sup> BASF 3510 H

Insecticide use should be restricted to chlorpyrifos, trichlorfon and carbaryl. These materials are moderately toxic, broad-spectrum insecticides. Chlorpyrifos is routinely used to control pests in the home. Carbaryl is used for insect control in turf as well as vegetable gardens. Trichlorfon and carbaryl are the least toxic of turf insecticides and would pose the least environmental hazard, while still achieving adequate pest control. Care should be exercised to apply these materials according to label directions, especially since insecticides represent the most toxic pesticides used in golf course management. Potential contamination of waterways can be minimized by applying these materials on a curative basis rather than preventatively.

Many other insecticides are available for turf use but high toxicity and potential for movement in the soil prohibit their use on this site. Materials to be especially concerned with are nematicides, such as ethoprop and fenamiphos, and isofenphos insecticides because of their high toxicities.

#### Fungicides

- iprodione
- benomyl
- mancozeb
- metalaxyl
- thiram
- chlorothalonil
- triadimefon
- anilazine

Fungicides, as a group, are generally less toxic than insecticides, nematicides and herbicides. All of the fungicides listed are categorized as class III pesticides which have acute oral LD<sub>50</sub>'s greater than 500 mg/kg and which represent the least toxic pesticides.

#### Fertilizers

- inorganic phosphorous sources
- inorganic potassium sources
- sulfur coated urea
- isobutylidene diurea
- urea formaldehyde
- methylene urea

Periodic nitrogen (N), phosphorous (P) and potassium (K) fertilizer applications will be needed to sustain the growth of turfgrass on the proposed golf course. Each of these three primary nutrients behaves differently in the soil. Nitrogen may be applied in many different forms, such as nitrate, ammonium, ammonia or urea, but nearly all applied nitrogen will eventually be converted to nitrate by soil microorganisms. Nitrate nitrogen is the most mobile of all

three primary nutrients and can be lost from the root zone by leaching, volatilization and denitrification. Numerous studies have been conducted addressing ammonia volatilization from N sources applied to turf (Titko, et al., 1984, 1987; Joo, et al., 1985, 1986) and denitrification losses from turf (Torello and Mancino, 1984a, 1984b; Mancino and Torello, 1986). Titko and coworkers estimated that up to 60% of urea surface-applied to sod can be lost via ammonia volatilization, especially when granular urea is not watered in immediately after application. Torello and Mancino (1984b) reported similar results and also indicated (1986) that denitrification losses up to 85% can occur depending on soil type.

Hummel (4) showed that 48 to 52% of applied nitrogen was recovered by turfgrass when soluble N sources and sulfur coated urea (SCU) were used on Kentucky bluegrass turf. SCU consists of soluble urea pellets which have been covered with a layer of molten sulfur. Release of the soluble N is dependent on breakdown of the sulfur coating which gives this N source its slow release characteristics. Since N is released slowly into the soil solution the potential for nitrate loss due to leaching is minimized. Hummel (3) showed that 38 to 53% of applied N is released from SCU over a two month period therefore a large portion of the N from SCU is tied up in nonleachable pellets and taken up by turfgrasses or can be accounted for via denitrification and volatilization. Other slow release N sources include isobutylidene diurea (IBDU) and urea formaldehyde (UF). Both IBDU and UF breakdown over a long period of time to eventually release N. Normally IBDU and UF applications have to be supplemented with more quickly available N sources such as urea or methylene urea to provide initial turfgrass response after application. Methylene urea releases N slower than urea and would be the preferred quickly available N source for this site. High rates, greater than 1.0 lb N per 1000 ft<sup>2</sup>, of quickly available N sources should be avoided to minimize potential leaching problems.

Phosphorus in general is a relatively immobile element in most soils, since it is subject to the formation of precipitates and is adsorbed by soil particles. In order for applied phosphorus to pose an environmental threat as a source of nutrient enrichment to waterways it must move from the site of application to the waterway and remain in or enter into solution in the waterway. When applied to turf the possibility of phosphorus movement into adjacent waterways from phosphorus application is minimal. First, well managed turf is extremely effective in stabilizing soil, thus minimizing potential movement of phosphorus by sediment loss.

Since a major portion of applied phosphorus becomes fixed, very little applied P would be subject to leaching. Upon application to soil, P may be adsorbed to soil particles and/or precipitated with iron and aluminum at low pH or calcium or magnesium at more neutral or higher pHs (Sample, et al., 1980). Consequently, movement of P from the site of application is primarily the result of movement of sediment.

Phosphorus is also transported in water in the form of organic debris. Plants utilize soil P and incorporate the P into plant parts. When plant parts such as leaves are shed, surface water may transport this organic P into waterways. Several studies have noted an increase in P loss from forested land that coincided with leaf-fall in November (Schreiber, et al., 1976; Duffy, et al., 1978; Taylor, et al., 1971). Increase in organic P movement has also been shown to coincide with snow melt (Timmons, et al., 1977). Consequently, it is important that grass clippings be prevented from movement off the site. Two ways to minimize movement of clippings from the proposed golf course are to avoid deposition of clippings, collected after mowing, in areas near waters edge and to return clippings to the soil at the point of mowing. Unlike tree leaves, turfgrass leaf material breaks down rapidly, and if clippings are returned to the soil, the potential for movement will be minimized. Clippings are generally returned on fairways and roughs which comprise the bulk of turf acreage on a golf course; however, clippings are generally collected on golf greens and sometimes on tees. Care should be taken to deposit these clippings in areas where movement would be minimized.

It is also important to note the extremely effective soil stabilizing characteristics of well maintained turf. Since movement of P on soil sediment or in organic debris would be restricted in stabilized soil, the impact of applied P on water quality would be further reduced.

Taylor and Kilmer (1980) further point out that much P carried into lakes by sediment may be inactivated by depositional removal from the biotic zone. Interpretation of the impact of a particular P source on water quality at a downstream location must take into account effects of dilution, adsorption and contributions from both other sources and the natural background as well as the actual amount of P that may be released by the source at a particular time.

Potassium is also relatively immobile in the soil but not as much as phosphorous. Some potassium may be lost from the soil through leaching, but potassium is not perceived to have an adverse influence on the Bay ecosystem. (1).

## VI. Conclusions and Summary

Based on the environmental aspects of this project, a recommendation is made to approve the proposed Queenstown Inn Golf Course in Queenstown, Maryland. The evaluation for the potential for water quality impacts from the proposed Queenstown Inn Golf Course resulted in the following conclusions:

- Approval of the golf course project would be consistent with the goals of the Critical Area Commission. An improvement in the quality of water emanating from the site would result from conversion of the site from its current farm usage to a golf course.
- The stabilizing effects of turf would reduce phosphorus laden sediment movement from the site into adjacent waterways. Grasses are currently recommended by the Cooperative Extension Service as vegetative buffers around cropland adjacent to the Chesapeake Bay and its tributaries.
- Based on the sandy nature of soils on the site, application of soluble nitrogen fertilizers and high solubility pesticides pose potential contamination of ground water. Current use of the site for corn and soybean production includes the use of soluble N fertilizers as well as carbofuron, which is a highly toxic insecticide which has only a moderate degree of adsorption to soil particles. Pesticides intended for use on the proposed golf course have been selected for their low toxicity and high soil adsorptive characteristics.
- Use of the site as a golf course would reduce the acreage of land on the site which receives fertilizer and pesticide applications (golf course - 45.5A; farm - 245 acres). Areas designated as roughs comprise the majority of the acreage on a golf course, and roughs generally do not receive fertilizer and pesticide applications. Land used for corn and soybean production receive uniform fertilizer and pesticide treatments over the entire cultivated areas.
- Use of highly toxic materials would be eliminated with the use of the site as a golf course. Pesticides currently used for crop production on the site include toxicity Class I (LD50 up to and including 50 mg/kg, i.e. carbofuron) materials, whereas all pesticides intended for use on the golf course include materials that fall within toxicity Class III (LD50 from 500 to 5,000 mg/kg) and toxicity Class IV (LD50 greater than 5,000 mg/kg) with the exception of chlorpyrifos, an insecticide that falls into toxicity Class II (LD50 50 to 500 mg/kg).
- Fertilizer application on the site would be reduced by a factor of 7 for nitrogen, 6.5 for phosphorus and 17.3<sup>1</sup> if the golf course was developed on My Lord's Gift Farm site, thus reducing the threat to submerged aquatic vegetation through potential eutrophication.

- A storm water management plan will be developed on the proposed golf course whereby storm water will be directed to ponds to be used for golf course irrigation. No stormwater management plans have been developed for the farm.
- Sewage effluent from the Queenstown sewage treatment plant will be used for irrigation on the golf course, thus eliminating direct deposit of effluent into Queenstown Creek.

#### LITERATURE CITED

- Berg, G. L. (ed.). 1988. Farm chemicals handbook. Meister Publishing Company, Willoughby, Ohio.
- Duffy, P. D., J. D. Schreiber and D. C. McClurkin. 1978. Aqueous and sediment-phase phosphorus yields from five southern pine watersheds. J. Environ. Qual. 7:45-50.
- Extension Services of the Chesapeake Basin. 1985. Best management practices for nutrient uses in the Chesapeake basin. Bulletin 308 College of Agriculture, University of Maryland, College Park, MD.
- Gross, C. M., J. S. Angle, R. L. Hill and M. S. Welterlen. 1987. Natural and simulated runoff from turfgrass. Agron. Abstracts. 79: 135.
- Hayes, J. C., B. J. Barfield and R. I. Barnhisel. 1978. Filtration of sediment by simulated vegetation II. Unstead flow with non-homogeneous sediment. Transactions of the ASAE: 21 (10): 1063-1067.
- Hummel, N. W. 1982. Evaluation of sulfur-coated urea for fertilization of turfgrasses. Ph.D. Thesis. The Pennsylvania State University. University Park, PA.
- Hummel, N. W. and D. V. Waddington. 1981. Evaluation of slow release nitrogen sources on Baron Kentucky bluegrass Soil Sci. Soc. Am. J. 45 (5): 966-969.
- Joo, Y. K. and N. E. Christians. 1986. The measurement of ammonia volatilization from turfgrass areas as treated with surface applied urea. Agron. Abstr. 78: 135.
- Joo, Y. K. and N.E. Christians. 1985. The reduction of ammonia volatilization from turfgrass areas treated with surface-applied nitrogen. Agron. Abstr. 77: 117.
- Mancino, C. F. and W. A. Torello. 1986. Denitrification losses from Kentucky bluegrass sod. Agron. Abstr. 78: 136.
- Sample, E. C., R. J. Soper and G. J. Racz. 1980. Reactions of phosphate fertilizers in soils. In F. E. Khasawneh, E. C. Sample

and E. J. Kamprath (Eds.). The role of phosphorus in Agriculture. p. 284-285. The American Society of Agronomy, Madison, Wisconsin.

Schreiber, J. D., P. D. Duffy and D. C. McClurkin. 1976. Dissolved nutrient losses in storm runoff from five southern pine watersheds. J. Environ. Qual. 2:292-295.

Soil Conservation Service. 1966. Soil survey of Queen Annes County, Maryland. U.S. Government Printing Office, Washington, D.C.

Taylor, A. W., W. M. Edwards and E. C. Simpson. 1971. Nutrients in streams draining woodland and farmland near Coshocton, Ohio. Water Resour. Res. 7:81-89.

Taylor, A. W. and V. J. Kilmer. 1980. Agricultural phosphorus in the environment. In F. E. Khasawneh, E. C. Sample and E. J. Kamprath (Eds.). The role of phosphorus in Agriculture. p. 545-557. The American Society of Agronomy, Madison, Wisconsin.

Timmons, D. R., E. S. Verry, R. E. Burwell and R. F. Holt. 1977. Nutrient transport in surface runoff and interflow from an aspen-birch forest. J. Environ. Qual. 6:188-192.

Tisdale, S. L., W. L. Nelson and J. D. Beaton. 1985. Soil fertility and fertilizers. MacMillan Publishing Company. New York, New York.

Titko, S., J. R. Street and T. J. Logan. 1984. Factors affecting ammonia volatilization from urea applied to turfgrass in a laboratory study. Agron. Abstr. 76: 155.

Titko, S., J. R. Street and T. J. Logan. 1987. Volatilization of ammonia from granular and dissolved urea applied to turfgrass. Agron. J. 79: 535-540.

Tollner, E. W., B. J. Barfield, C. Vachirakornwatana and C. T. Haan. 1977. Sediment deposition patterns in simulated grass filters. Transactions of the ASAE 20 (4): 940-944.

Torello, W. A. and C. F. Mancino. 1984a. Enumeration of denitrifying bacteria in turf. Agron. Abstr. 76: 155.

Torello, W. A. and C. F. Mancino. 1984b. Denitrification in turf. Agron. Abstr. 76: 155.

U.S. Environmental Protection Agency. 1983. Reducing runoff pollution using vegetated borderland for manure application sites. USEPA Rep. 600/52-83-022. U.S. Government Printing Office, Washington, D.C.

U.S. Environmental Protection Agency. 1983. Swine manure and lagoon effluent applied to fescue. USEPA Rep. 600/S2-83-078. U.S. Government Printing Office, Washington, D.C.

Weed Science Society of America. 1983. Herbicide handbook. Weed Science Society of America. Champaign, Illinois.

Young, R. A., T. Huntrods and W. Anderson. 1980. Effectiveness of vegetated buffer strips in controlling pollution from feedlot runoff. J. Environ. Qual. 9 (3): 483-487.



County Seat from  
1708 to 1789

## TOWN COMMISSIONERS

P.O. BOX NO. 4

QUEENSTOWN, MARYLAND 21688

ATTACHMENT "C"

May 2, 1988

Mr. Barry Perkel  
Queen Anne's County Planning Office  
County Office Building  
Centreville, MD 21617

Dear Barry,

The Town Commissioners have reviewed the draft of the inter-governmental agreement concerning the growth allocation for the proposed development of the My Lord's Gift tract west of Queenstown. The Commissioners feel that it is more appropriate for an agreement of this nature to accompany an annexation agreement between the Town and the County, than to be exercised at this time. However, the Commissioners do agree to the following:

If and when the owners of property west of Queenstown, known as My Lord's Gift, petition the Town for annexation of the property by the Town for the purpose of developing a golf course/inn complex, then the Town will permit the developer to utilize a forty (40) acre area of Limited Development Area (LDA) within the Critical Area and contiguous to the Town for the development of the inn, golf center, parking and related accessory facilities; and the remainder of the property within the Critical Area Zone, which is designated as Rural Conservation Area (RCA), and will be developed in a manner to retain its RCA like characteristics as specified by the Critical Area Commission.

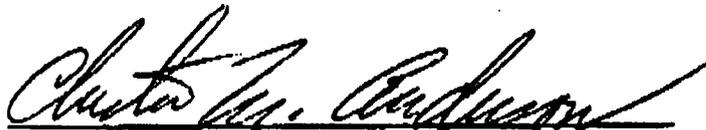
We hope this letter satisfies the needs of the County with respect to the designation of this piece of Growth Allocation. If such designation occurs, the Town would like it to be stipulated that the designation be contingent upon the project being annexed into the Town.

We thank you for your considerations in this matter.

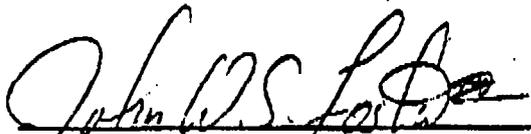
Queen Anne's County Planning  
Page 2

Respectfully,

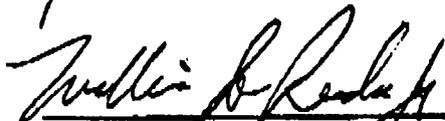
QUEENSTOWN COMMISSIONERS



Chester M. Anderson, President



John W. S. Foster, III, Commissioner



William A. Rada, Jr., Commissioner

CMA:JWSF:WAR/awa

cc: Robert R. Price, Jr.  
Town Attorney

File



6/11/88 *Commission*  
*mtg*

JUDGE SOLOMON LISS  
CHAIRMAN

STATE OF MARYLAND  
**CHESAPEAKE BAY CRITICAL AREAS COMMISSION**  
DEPARTMENT OF NATURAL RESOURCES  
TAWES STATE OFFICE BUILDING, D-4  
ANNAPOLIS, MARYLAND 21401  
974-2418 or 974-2426

SARAH J. TAYLOR, PhD  
EXECUTIVE DIRECTOR

COMMISSIONERS

June 9, 1988

Thomas Osborne  
Anne Arundel Co.

James E. Gutman  
Anne Arundel Co.

Ronald Karasic  
Baltimore City

Albert W. Zahniser  
Calvert Co.

Thomas Jarvis  
Caroline Co.

Kathryn D. Langner  
Cecil Co.

Samuel Y. Bowling  
Charles Co.

G. Steele Phillips  
Dorchester Co.

Victor K. Butanis  
Harford Co.

Wallace D. Miller  
Kent Co.

Parris Glendening  
Prince George's Co.

Robert R. Price, Jr.  
Queen Anne's Co.

J. Frank Raley, Jr.  
St. Mary's Co.

Ronald D. Adkins  
Somerset Co.

Shepard Krech, Jr.  
Talbot Co.

Samuel E. Turner, Sr.  
Talbot Co.

William J. Bostian  
Wicomico Co.

Russell Blake  
Worcester Co.

Dear Commission Member:

The next Meeting of the Chesapeake Bay Critical Area Commission is scheduled for June 15, 1988 from 1:00 to 5:30 p.m., at the Merkle Wildlife Sanctuary, 11704 Fenno Road, Upper Marlboro, Maryland. A map with directions is enclosed. The Agenda of the Meeting and Minutes of the Meeting of June 1st are also enclosed.

There are several important votes that are scheduled for the Meeting, so I again urge your attendance and prompt arrival. There should also be time for a tour of the facility as well as taking the Critical Area Driving Tour.

I look forward to seeing you there.

Sincerely,

*Solomon Liss*  
Solomon Liss  
Chairman

SL/jjd

Attachments

cc: Mike Pugh  
Barry Perkel

CABINET MEMBERS

Wayne A. Cawley, Jr.  
Agriculture

J. Randall Evans  
Employment and Economic Development

Martin Walsh, Jr.  
Environment

Ardath Cade  
Housing and Community Development

Torrey Brown  
Natural Resources

Constance Lieder  
Planning

CHESAPEAKE BAY CRITICAL AREA COMMISSION

AGENDA

Merkle Wildlife Sanctuary and  
Visitor's Centre  
11704 Fenno Road  
Upper Marlboro, Maryland

June 15, 1988

1:00 - 5:30 p.m.

1:00 - 1:10	Approval of Minutes of June 1, 1988	Solomon Liss Chairman
1:10 - 1:40	Vote on Queen Anne's County Program	Charles Davis/ Panel
1:40 - 2:00	Vote on Town of Vienna Program	Ed Phillips/ Panel
2:00 - 2:20	Vote on Town of Secretary Program	Ed Phillips/ Panel
2:20 - 2:40	Vote on Town of Chesapeake City Program	Kevin Sullivan/ Panel
2:40 - 3:00	Resolution for the Towns of Church Creek, Brookview, Galestown, and Eldorado	Ed Phillips/ Panel
3:00 - 3:15	Break	
3:15 - 4:00	Cecil County Program Parcel Designation Issues and Vote	Mike Pugh/ Consultants/ Panel
4:00 - 4:30	Old Business: Briefing of Governor Opinion of Attorney General on Voting Procedure	Solomon Liss Chairman
4:30 - 5:30	New Business  Welcoming to the Sanctuary and Tour	Solomon Liss Chairman

Next Commission Meeting: June 29th, Tidewater Inn, Easton,  
Maryland

CHESAPEAKE BAY CRITICAL AREA COMMISSION

Minutes of Meeting Held  
June 1, 1988

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:

Samuel Bowling	Ronald Karasic
Victor Butanis	Ronald Adkins
J. Frank Raley, Jr.	Shepard Krech, Jr.
Wallace Miller	Thomas Osborne
James E. Gutman	Robert Price, Jr.
Albert Zahniser	Ronald Hickernell
Samuel Turner, Sr.	Kathryn Langner
Parris Glendening	Thomas Jarvis
Larry Duket for Secretary Lieder	Robert Schoeplein for Secretary Evans
Robert Perciasepe of DOE	Louise Lawrence for Secretary Cawley
Deputy Secretary Cade of DEED	

The Minutes of the Meeting of May 18, 1988 were approved as written.

Chairman Liss reported that the Commission staff had received correspondence from the Washington Brick and Terra Cotta Company, concerning the proposal in Queen Anne's County to construct an Inn and Golf Course complex on approximately 400 acres adjacent to the Town of Queenstown. The letter was then distributed to the Commission Members.

Chairman Liss asked Mr. Marcus Pollock to report on the status of the City of Annapolis' Program. Mr. Pollock said that the City has provided the staff with the changes to the text of the Program, but the City's process for local approval of the changed Program will not be completed until a hearing is held scheduled for May 19th, 1988. It was therefore, suggested by the Assistant Attorney General that the Commission not vote on the Program at this Meeting, but postpone action until the June 15th Meeting.

Mr. Gutman asked if the Commission's generic Program need be put in place in the interim? Chairman Liss indicated that in view of the fact that action was to be taken by the City within a few days after the next Commission Meeting, it would not be necessary to vote to take over the Program at this time. There was no objection.

Mr. Gutman then asked if the City has made the Commission-requested changes in the delineation of the Brown Property?

Critical Area Commission  
Minutes - 6/1/88  
Page Two

Mr. Pollock answered that the staff has advised the City that if they do not map the Brown property as requested by the Commission, it will then be the Commission's responsibility to take over the Program and make a determination for the 7 1/2-acre delineation of the property.

Chairman Liss asked Mr. Ren Serey to give a report on Calvert County's Program. Mr. Serey said that the County has made all of the changes requested by the Commission. However, there remain several outstanding mapping issues. He said that the Panel will continue to meet with the County Planners. The Panel's recommendation is for the Commission to take over the Program, using the County's Program and Zoning Ordinances, and give the County time to present its additional mapping system.

Mr. Epstein asked what maps would be used by the Commission? Mr. Bowling, Panel Chairman, said that there are certain procedures that the Panel had asked the County to follow to revise its maps, and the finished product would be the maps that the Commission will consider for adoption. The schedule for the hearings will be deferred until the Panel again meets with the County.

A motion was made and seconded that whereas Section 8-1810 of the Critical Area Law provides that if changes as directed are not timely made, the Commission must prepare and adopt a local Program, by way of Regulation, which the local jurisdiction must then enforce. If after the Commission adopts a substitute local Program, the local jurisdiction submits an alternative one acceptable to the Commission under the criteria, that one would supercede the one adopted by the Commission. The Commission hereby notifies that it will promulgate by Regulation, a Critical Area Program, that Program being the one developed and changed by the County to date, but with different maps. The Panel of the Commission will constitute it to hold two hearings no less than 10 days apart in Calvert County, on the Commission Program, and the Program will then be published in the Maryland Register as appropriate. The vote was 18:0 in favor.

Mr. Serey was asked to report on the status of the Program for the Town of Chesapeake Beach. Mr. Serey said that the Town has made all requested changes to its Program. However, the requested Zoning Ordinance changes have not been completed and there is an outstanding mapping issue. The Panel still recommends that 73 acres be designated RCA, but the Town is still requesting an LDA designation for those acres. He said that at the same time, however, the Town is exploring an exclusion for this parcel, as well as other sections of the Town.

Mr. Glendening, Panel Chairman, said that the Panel recommends the Commission take over the Program. The Panel will consider the exclusion when the Town submits a formal request.

A motion was made and seconded that the Commission take over and prepare the local Program of Chesapeake Beach. Section 8-1810 of the Critical Area Law provides that if changes as directed are not timely made, the Commission must prepare and adopt a local Program, by way of Regulation, which the local jurisdiction must then enforce. If after the Commission adopts a substitute local Program, the local jurisdiction submits an alternative one acceptable to the Commission under the criteria, that one would supercede the one adopted by the Commission. The Commission hereby notifies that it will promulgate by Regulation, a Critical Area Program, that Program being the one developed and changed by the Town to date, with a changed map. The Panel of the Commission will hold two hearings no less than 10 days apart in Chesapeake Beach, on the Commission Program, and the Program will then be further published in the Maryland Register as appropriate. The vote was 18:0 in favor.

Mr. Serey was then asked to report on the Program for the Town of Indian Head. Mr. Serey reported that the 90-day period has ended. He has worked with the Town Planner on the requested staff changes. Most of those changes have been made.

Mr. Schoepflein, Panel Chairman, said that the Panel recommends the Program be returned to the Town for completion of the necessary revisions.

A motion was made and seconded that the Commission believes the local Program for the Town of Indian Head is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the Town of Indian Head to make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 18:0 in favor.

Mr. Serey reported on the status for the Program of Charles County, saying that the County has made most of the staff-recommended changes. However, the 90-day period has ended, and therefore the Panel recommends the Program be returned to the County for revision. He said that there are no outstanding issues.

A motion was made and seconded that the Commission believes the local Program for Charles County is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests that Charles County make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 18:0 in favor.

Chairman Liss asked Mr. Davis to report on the Program for the Town of Chestertown. Mr. Davis reported that the Town is at the end of the 90-day review period. There are two areas in the Town that are recently annexed and for which the Town requested Growth Allocation from the County to allow those areas to change to IDAs. The Commission staff has reviewed the Program, and recommends the Commission to direct the Town to make suggested changes.

Mr. Osborne, Panel Chairman reported that the Panel has been reviewing the Program, but has not as yet had a formal Panel meeting, though much discussion and comment has been exchanged among the Panel members with the staff. He said that the Panel thus recommends the Commission return the Program to the Town for revision.

A motion was made and seconded that the Commission believes the local Program for the Town of Chestertown is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the Town of Chestertown to make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 17:0 in favor with 1 abstention.

Chairman Liss asked Mr. Ed Phillips to give a status report on the Town of Princess Anne. Mr. Phillips noted that there were changes to be made and suggested that the Program be returned to the Town.

Ms. Langner, Panel Chairman said that the Panel recommends the Program be returned to the Town for revision.

A motion was made and seconded that the Commission believes the local Program for the Town of Princess Anne is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the Town of Princess Anne to make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 18:0 in favor.

Mr. Phillips reported on the City of Crisfield's Program. He said that the City is asking for an exemption and an exclusion. The Panel and staff feel that there needs to be more documentation from the City concerning the exclusion, before an evaluation can be made.

Mr. Karasic, Panel Chairman, said that the Panel is in agreement with the staff recommendations.

A motion was made and seconded that the Commission believes the local Program for the City of Crisfield is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the City of Crisfield to make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 18:0 in favor.

Chairman Liss then asked Ms. Carolyn Watson to report on the Town of North Beach. Ms. Watson said that in general, the Program is a good one, however, some revisions need to be made to the Program. She said that the ordinance language was not submitted with the Program. A mapping change will need to be made as well, but most of the staff comments recommend a strengthening of the language of the Program.

Deputy Secretary Cade said that the Panel recommends the Program be returned to the Town for revisions, including a mapping change of a 16-acre parcel from IDA to LDA.

A motion was made and seconded that the Commission believes the local Program for the Town of North Beach is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the Town of North Beach to make the changes recommended by the staff report and

endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 19:0 in favor.

Chairman Liss asked Dr. Sullivan to give an explanation of the Generic Program for the Commission that will be used in whole or in part as the substitute Program in case of Commission take-over of a local Program. Dr. Sullivan said that a draft had been submitted to the Commission in a previous mailing. He explained that this Commission-prepared Program will not necessarily be used as a whole, but in parts to be substituted where needed in the local Programs.

Some requests for clarification were made.

Chairman Liss suggested that the Commission accept the document as one with which the Commission can work, as time progresses.

Chairman Liss then asked Mr. Davis to report on Talbot County's Program. Mr. Davis said that the Program that was submitted to the Commission did not have specifics of Program language by which to implement the Program. The consultant for the County is now in the process of developing its regulations. The County will not meet the June 11th deadline, but there are many portions of the generic Program that can be merged with Talbot County's Program to achieve what the County is intending in regard to the zoning. The Commission Panel has not yet held a hearing for the County.

Mr. Price asked if the County has a moratorium in effect? Mr. Davis answered affirmatively, and the plans were to extend this until a Program was implemented to regulate development.

A motion was made and seconded that whereas the ordinance language for the Program has not yet been submitted, and whereas the June 11th date is approaching, the Commission should take over the Talbot County program. If after the Commission adopts a substitute local Program, the local jurisdiction submits an acceptable alternative one, that one may supercede the Commission-adopted one. Thus, the Commission hereby notices that it will promulgate by regulation, a Talbot County Critical Area Program, using part of what the County has developed to date. the Commission Panel will hold two hearings, no less than 10 days

apart, in Talbot County on the Commission Program, and then the program will be further published in the Maryland Register, as appropriate. The vote was 17:0.

Chairman Liss asked Mr. Serey to report on the Program for St. Mary's County. Mr. Serey said that the County is working on the requested changes. In addition, the County is proposing a new mapping methodology which will be submitted to the Commission within the next two weeks. The new maps will be substantially different from the originally submitted maps and the Panel will consider the new maps when they are submitted. He said that the Panel recommends that the Commission take over the St. Mary's County Program.

A motion was made and seconded that under Section 8-1810, the Commission must prepare and adopt a local Program, by way of Regulation, which the local jurisdiction must then enforce. If after the Commission adopts a substitute local Program, the local jurisdiction submits an alternative one acceptable to the Commission under the criteria, that one would supercede the one adopted by the Commission. The Commission hereby notifies, that it will promulgate by Regulation, a Critical Area Program, that Program being the one developed and changed by the County to date. The Panel of the Commission will constitute it to hold two hearings no less than 10 days apart in St. Mary's County, on the Commission Program, and the Program will then be further published in the Maryland Register as appropriate. The vote was 17:0 in favor.

Chairman Liss asked Mr. Robert Ellsworth of the Waterway Improvement Division of the Department of Natural Resources to report on the Boat Ramp Project at Susquehanna State Park in Harford, Maryland. Mr. Ellsworth described the project development plans.

Mr. Bowling asked if it was intended as a boat launch, and would the facility be closed during construction? Mr. Ellsworth answered that the project is strictly a boat launch and would remain open during construction.

Mr. Zahniser asked if parking is as depicted on the plan view? Mr. Ellsworth answered affirmatively.

Chairman Liss appointed the Panel to review this project as follows: Skip Zahniser, Chairman, Bob Schoeplein, Jim Gutman, Victor Butanis, and Chairman Liss.

Critical Area Commission  
Minutes - 6/1/88  
Page Eight

UNDER OLD BUSINESS

Dr. Taylor reported that the Regulations on Project Notification will be printed in final form in the Maryland Register.

Mr. Gutman asked if there were any actions by the Legislature that will effect the Commission?

Dr. Taylor answered that the Commission will be notified of any activities concerning it after the Oversight Committee begins its meetings in the Summer.

Dr. Krech asked what the status of the four-year term Commission Members is? Chairman Liss replied that the Commission is awaiting notice of re-appointment from the Governor's office.

UNDER NEW BUSINESS

Dr. Taylor reported that a subcommittee will need to be appointed to work with the Maryland Geological Survey on the development of criteria for the drilling of oil or gas in the Critical Area.

Chairman Liss introduced Delegate William Bevan to speak about the adverse effects of the usage of the chemical Dimilin to control the growth of gypsy moths. Delegate Bevan introduced Delegate Joan Pitkin, Ms. Rose Marie Saccardi and Dr. Kevin Thorpe and other experts, to describe the effects of Dimilin on the environment.

There being no further business, the Meeting was adjourned.



6/15/88 file  
Commission  
Mtg.

JUDGE SOLOMON LISS  
CHAIRMAN

STATE OF MARYLAND  
**CHESAPEAKE BAY CRITICAL AREAS COMMISSION**  
DEPARTMENT OF NATURAL RESOURCES  
TAWES STATE OFFICE BUILDING, D-4  
ANNAPOLIS, MARYLAND 21401  
974-2418 or 974-2426

SARAH J. TAYLOR, PhD  
EXECUTIVE DIRECTOR

COMMISSIONERS

- Thomas Osborne  
Anne Arundel Co.
- James E. Gutman  
Anne Arundel Co.
- Ronald Karasic  
Baltimore City
- Albert W. Zahniser  
Calvert Co.
- Thomas Jarvis  
Caroline Co.
- Kathryn D. Langner  
Cecil Co.
- Samuel Y. Bowling  
Charles Co.
- G. Steele Phillips  
Dorchester Co.
- Victor K. Butanis  
Harford Co.
- Wallace D. Miller  
Kent Co.
- Parris Giendening  
Prince George's Co.
- Robert R. Price, Jr.  
Queen Anne's Co.
- J. Frank Raley, Jr.  
St. Mary's Co.
- Ronald D. Adkins  
Somerset Co.
- Shepard Krech, Jr.  
Talbot Co.
- Samuel E. Turner, Sr.  
Talbot Co.
- William J. Bostian  
Wicomico Co.
- Russell Blake  
Worcester Co.

June 23, 1988

Dear Commission Member:

The next Meeting of the Chesapeake Bay Critical Area Commission is scheduled for Wednesday, June 29, 1988, at the Tidewater Inn in Easton. We will begin promptly at 1:00 p.m. The Agenda of the Meeting and the Minutes of the Meeting of June 15th are enclosed.

Please note that there are several votes scheduled for the Meeting, so again, I urge your attendance and prompt arrival.

Also enclosed is a draft of another Guidebook. This one applies to the establishment of Natural Parks. Please read the draft carefully, and provide Dr. Sarah Taylor with your comments by no later than July 6, 1988, the following Commission Meeting.

Sincerely,

*SL*  
Solomon Liss  
Chairman

SL/jjd

Enclosures

CABINET MEMBERS

- Wayne A. Cawley, Jr.  
Agriculture
- J. Randall Evans  
Employment and Economic Development
- Martin Walsh, Jr.  
Environment
- Ardath Cade  
Housing and Community Development
- Torrey Brown  
Natural Resources
- Constance Lieder  
Planning

*Perpetual Savings Bank Wash. D.C.*

CHESAPEAKE BAY CRITICAL AREA COMMISSION

AGENDA

*Informal Basis  
Atty Gen opinion*

Tidewater Inn  
Easton, Maryland

June 29, 1988

1:00 - 5:00 p.m.

- 1:00 - 1:10 Approval of Minutes of June 15, 1988 Solomon Liss Chairman
- 1:10 - 1:20 Vote on Wicomico County Program *no vote* Kevin Sullivan/ Panel
- 1:20 - 1:40 Vote on City of Annapolis Program *ltr sent.* Marcus Pollock/ Panel *Letter Fred Delaware*
- 1:40 - 2:00 Votes on Towns of ~~Federalburg~~ and Denton *ltr sent* Sarah Taylor/ Panel  
(Perhaps)  
*Votes on Brookview + Eldorado ltr sent*
- 2:00 - 2:30 Votes on Somerset Co. and Dorchester Co. Programs Ed Phillips/ Panel
- 2:30 - 2:50 Vote on Queen Anne's Co. Program Charles Davis/ Panel
- 2:50 - 3:15 Break
- 3:15 - 3:45 Introduction to the Natural Parks Study Dawnn McCleary, Planner
- 3:45 - 4:15 Presentation of the 1 du/20 Acres Consultant Study Mr. Bob Gray, Ms. Lucy Vinis, Resource Consultants, Inc.
- 4:15 - 4:30 Old Business Solomon Liss Chairman  
New Business

*Susquehanna Boat Ramp*

Next Commission Meeting: July 6th, Department of Agriculture Annapolis, Maryland

*Attention  
Genie Program  
got it typed  
w/ disk*

*20 acres concept  
policy*

*July 6th  
Do Pat Beaton*

*Caroline Co.  
Federalburg  
Potomac  
Chapinville  
Belle*

*Wicomico Co.*

*Preliminary  
Approval  
Plans*

*buffer  
borderline  
non-federal*

*"Sever Court"  
Annapolis*

CHESAPEAKE BAY CRITICAL AREA COMMISSION

Minutes of Meeting Held  
June 15, 1988

The Chesapeake Bay Critical Area Commission met at the Merkle Wildlife Sanctuary, in Upper Marolboro, Maryland. The meeting was called to order by Chairman Solomon Liss with the following Members in attendance:

Wallace Miller	Ronald Adkins
G. Steele Phillips	Shepard Krech, Jr.
Albert Zahniser	Samuel Bowling
Kathryn Langner	Samuel Turner, Sr.
Robert Price, Jr.	Thomas Jarvis
Ronald Hickernell	Thomas Osborne
Deputy Secretary Cade of DHCD	Ronald Karasic
Carolyn Watson for	Louise Lawrence for
Parris Glendening	Secretary Cawley of DOA
Larry Duket for	Robert Schoeplein of DEED
Secretary Lieder of DSP	Robert Perciasepe of DOE

The Minutes of the Meeting of June 1st were approved as written.

Chairman Liss asked Mr. Charles Davis to report on the Program for Queen Anne's County. Mr. Davis said that there were still some wording problems with the Program, and some confusion still remains. There also are two outstanding mapping issues. Both the County and the Panel will strive to have all matters resolved by the next Commission Meeting.

Chairman Liss asked Mr. Ed Phillips to report on the Program for the Town of Vienna. Mr. Phillips stated that in 1983, as a result of a new comprehensive plan which mandated a study to be made of the waterfront area, a waterfront plan has been developed which adjusts well to the Critical Area Plan. He suggested that with only minor changes and corrections, the Program be returned to the Town for completion. Ms. Langner, Panel Chairman, reported the Panel's thoughts that no major problems exist with the Program itself.

Mr. Steele Phillips asked if another hearing was required of the Town to be held. Chairman Liss answered that only if changes to a Program are substantial is another hearing required to be held.

A motion was made and seconded that the Commission believes the local Program for the Town of Vienna is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the Town of Vienna to make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program

must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 15:0 in favor.

Mr. Ed Phillips was then asked to report on the Program for the Town of Secretary. Mr. Phillips said that the Programs for the Towns of Secretary and Vienna are practically identical, though Secretary is slightly larger with more land in the Critical Area.

The Town of Secretary's Buffer is almost fully developed. Only minor changes are required of the Program. Ms. Langner, Panel Chairman, reported that in essence, the changes needing to be made to the Town of Secretary's Program are similar to those needed in the Program of the Town of Vienna.

A motion was made and seconded that the Commission believes the local Program for the Town of Secretary is a good one, but for final approval pursuant to Section 8-1809(d)(2) of the Critical Area Law, the Commission requests the Town of Secretary to make the changes recommended by the staff report and endorsed by the Panel. Pursuant to Section 8-1809(d)(3), such changed Program must be re-submitted to the Commission within 40 days and only after at least one additional public hearing has been held concerning the changes made to the originally submitted Program, relevant ordinances and plans. The vote was 15:0 in favor.

Chairman Liss then asked Mr. Phillips to report on the Towns of Brookview, Eldorado, Galestown, and Church Creek. Mr. Phillips said that these already developed Towns have a population of less than one hundred, with no major development activities for many years, and only about five individual developable lots among them. Therefore, it is suggested that the Towns apply to the Commission for complete exclusion.

Mr. Epstein explained that a resolution needed to be made by the Towns, to serve as the Town's existing "applicable laws and restrictions" under the exclusion section of the statute. Such Resolutions would state that should development occur or be proposed, or should a Town annex any land, the Town must comply insofar as possible with the Critical Area Program of Dorchester County. It was then agreed to by the Commission that the model resolution presented would be acceptable, and that the Towns will need to pass such Resolutions and then seek exclusions. An informal vote was taken to indicate Member support of the concept. The straw vote was unanimously in favor.

Chairman Liss asked Dr. Kevin Sullivan to report on the progress of the Program for Chesapeake City. Dr. Sullivan said that the Town has made the requested changes to the Program, and there are no outstanding mapping issues. He reported that the Panel would recommend final adoption of the Program.

A motion was made and seconded that the Commission, pursuant to the Critical Area Law, Section 8-1809(d), approve Chesapeake City's local Critical Area Program, and direct that pursuant to Section 8-1809(e), within 90 days, the Town of Chesapeake City shall adopt the Program together with all relevant ordinance changes. The vote was 15:0 in favor.

Cecil County had requested an opportunity to present to the Commission two matters that were in dispute with respect to the designation of land in Cecil County. Mr. Michael Pugh, Director of Planning and Economic Development for Cecil County, would present the County's position on these matters, and the Commission's "special hearing" procedure would be used.

Dr. Sullivan was asked to explain the circumstances regarding the dispute. He distributed a staff report concerning the two parcels in question. He explained that Parcel #1 located north of Perryville, was in single ownership, whereas Parcel #2, located between North East and Charlestown, was in multiple ownership. He proceeded to describe these parcels, and the suggested designation and concerns of the Panel.

Dr. Sullivan also distributed other exhibits, those being aerial photographs of the parcels.

Mr. Price asked what is the present usage in Parcel #1? Dr. Sullivan answered that the parcel is in agricultural usage.

Mr. Epstein asked how far the rail line, and the moderate density development on the northeast side of the entire parcel, are from the Critical Area boundary. Dr. Sullivan answered that the rail line is between 1500-2000 feet beyond the Critical Area, and the moderate residential development is adjacent to the parcel..

Mr. Adkins asked what mapping rules were applied for this area? Dr. Sullivan answered that Cecil County had decided that any area served by sewer and water was to be mapped as LDA.

Dr. Sullivan then discussed Parcel #2, and distributed information concerning its designation and lay-out.

Mr. Bowling asked if the rail line runs completely through the parcel from one end to the other? Dr. Sullivan answered affirmatively.

Mr. Price asked what is the present zoning classification? It was stated that the classification is high density with minimum lot size being 6500 feet.

Folloiwnng Dr. Sullivan's presentation, Mr. Pugh presented the County's rationale for designating the Parcels as LDA.

In regard to Parcel #2, Dr. Krech asked if the pond present on the parcel was man-made. Mr. Pugh answered that its origin was unknown.

Mr. Pugh then presented to the Commission a compromise proposal with respect to Parcel #2. This would allow some of the Parcel to be designated RCA, but retain LDA adjacent to existing residential areas.

Chairman Liss asked if the County Commissioners had agreed to the proposed new designations as shown on the Parcel map? Mr. Pugh answered that they had not at this point in time, but believed that they would do so.

The Commission then considered the presentations made by both sides, decided that it agreed with the staff, and decided the property denoted as Parcel #1, should be designated as RCA.

A motion was made and seconded, with regard to Parcel #2, that the Commission accept the compromise with the stipulation that the lines of demarcation between LDA and RCA be as per the discussion of this meeting. The vote was 16 in favor with 1 abstention.

A motion was made and seconded that the second mapping issue referred to as parcel #1 by record, remain classified as RCA, as suggested by the Panel and mapped by the County in accordance with the Commission's previous direction. The vote was 15 in favor, 2 opposed.

A recording of proceedings including the presentation by both sides, and question and answers, were recorded and the transcription and exhibits will be made available through the Critical Area Commission Office.

Critical Area Commission  
Minutes - 6/15/88  
Page Five

UNDER NEW BUSINESS

Chairman Liss reported on the meeting that he and Dr. Taylor had with the Governor concerning the status of the local Programs. He said that reappointments were also discussed, and that notification will be forthcoming.

UNDER OLD BUSINESS

Chairman Liss asked Mr. Epstein to report on Senator Baker's request for the Attorney General's Opinion concerning Commission voting procedure. Mr. Epstein said that the Attorney General's Office had assigned an attorney to the matter and that research is now being undertaken.

Chairman Liss asked Dr. Taylor to report on Panel Meetings. Dr. Taylor said that a Panel Meeting for Caroline County will be held before the Commission Meeting at 10:00 a.m. The Panel consists of Wayne Cawley, Ron Karasic, Bob Price, Tom Jarvis, and Victor Butanis. At 11:00, a Panel Meeting will be held for the Towns of Denton and Federalburg. The Panel consists of Wayne Cawley, Ardath Cade, Steele Phillips, Victor Butanis, and Shepard Krech.

Dr. Taylor also reported that the Natural Parks study is now being copied for Commission review.

There being no further business, the Meeting was adjourned.

PANELS THAT ARE ALIVE AND WELL

I. PANELS TO REVIEW STATE PROJECTS

Master Plan Gunpowder Falls State Park (Days Cove)

Tom Osborne, Ch.	James Gutman
Ardath Cade	Bob Schoeplein
Victor Butanis	Abi Rome - <u>Staff</u>

Point Lookout Fishing Pier

Skip Zahniser, Ch.	Sam Bowling
Ardath Cade	James Gutman
Frank Raley	Abi Rome - <u>Staff</u>

Mosquito Mgt. Program

Connie Lieder, Ch.	Wayne Cawley
Torrey Brown	Shepard Krech
Steele Phillips	Sarah Taylor - <u>Staff</u>

II. PANELS TO HANDLE POLICIES & PROCEDURES

Accommodation of Additional Sewage Into Critical Area

Parris Glendening, Ch.	Bob Perciasepe
Kay Langner	Wayne Cawley
James Gutman	Bill Bostian
Shepard Krech	Sarah Taylor - <u>Staff</u>

Review Amendments, Project Notification Procedures & Hearing Process

Parris Glendening, Ch.	Wally Miller	<i>Connie Lieder</i>
Sam Bowling	John Griffin	
Ron Adkins	Sarah Taylor - <u>Staff</u>	

Natural Parks Guidance Paper

James Gutman, Ch.	Wally Miller
Ron Karasic	Tom Osborne
Shepard Krech	Dawnn McCleary - <u>Staff</u>
Sam Bowling	

Regulations on the Drilling of Oil & Gas in Critical Area

III. PANELS TO REVIEW LOCAL PROGRAMS & AMENDMENTS

Dates to Aim For

Program by 11/16/88

Centreville

Shepard Krech, Ch.	Russell Blake
Bob Price	John Griffin
Tom Osborne	Charlie Davis - <u>Staff</u>

Programs by 11/30/88

Indian Head

Bob Schoeplein, Ch.	Sam Bowling
Parris Glendening	Ron Karasic
Ardath Cade	Ren Serey - <u>Staff</u>
Frank Raley	

Mardella Springs/Sharptown

Shepard Krech	Steele Phillips
Wally Miller	Russell Blake
Victor Butanis	Ed Phillips - <u>Staff</u>

Queenstown

Kay Langner, Ch.	Shepard Krech
Connie Lieder	Ron Adkins
Ardath Cade	Charlie Davis - <u>Staff</u>

Salisbury

Bill Bostian, Ch.	Bob Schoeplein
Torrey Brown	Shepard Krech
Tom Osborne	Ed Phillips - <u>Staff</u>

Somerset County

Bob Price, Ch.	Ron Karasic
Shepard Krech	Russell Blake
Bill Bostian	Ed Phillips - <u>Staff</u>

Wicomico County

Victor Butanis	Russell Blake
Shepard Krech	Wally Miller
Steele Phillips	Ed Phillips - <u>Staff</u>

Program by 11/30/88

Worcester County

Bill Bostian, Ch.	Victor Butanis
Russell Blake	Bob Price
Ron Adkins	Sarah Taylor - <u>Staff</u>

Programs by 12/7/88

Caroline County

Victor Butanis, Ch.	Wayne Cawley
Ron Karasic	Bob Price
Tom Jarvis	Sarah Taylor - <u>Staff</u>

Chestertown

Tom Osborne, Ch.	Louise Lawrence
Bob Perciasepe	Kay Langner
Vitor Butanis	Charlie Davis - <u>Staff</u>

Denton

Ardath Cade, Ch.	Wayne Cawley
Steele Phillips	Victor Butanis
Shepard Krech	Sarah Taylor &
Tom Jarvis	Dawnn McCleary - <u>Staff</u>

Elkton

Ron Karasic, Ch.	Victor Butanis
James Gutman	Frank Raley
Sam Turner	Ren Serey - <u>Staff</u>

Federalsburg

Ardath Cade, Ch.	Wayne Cawley
Shepard Krech	Steele Phillips
Victor Butanis	Sarah Taylor &
Tom Jarvis	Dawnn McCleary - <u>Staff</u>

North Beach

Ardath Cade, Ch.	Tom Osborne
Ron Karasic	Torrey Brown
Bob Schoeplein	Anne Hairston &
	Sarah Taylor - <u>Staff</u>

Snow Hill

Kay Langner, Ch.	Ron Adkins
Wally Miller	Russell Blake
Bill Bostian	Sarah Taylor - <u>Staff</u>

Program by 12/7/88

St. Mary's County

James Gutman, Ch.	Skip Zahniser
Sam Bowling	Frank Raley
Bob Percisepe	Ren Serey - <u>Staff</u>

Programs by 12/21/88

Cecil Co. Amendments

Connie Lieder, Ch.	Victor Butanis
Ron Adkins	James Gutman
Louise Lawrence	Charlie Davis - <u>Staff</u>

Charles County

James Gutman, Ch.	Skip Zahniser
Connie Lieder	Bob Schoeplein
Parris Glendening	Ren Serey - <u>Staff</u>

Church Hill

Shepard Krech, Ch.	John Griffin
Russell Blake	Ron Adkins
Bob Price	Charlie Davis - <u>Staff</u>

Dorchester County Amendments

Bob Schoeplein, Ch.	Sam Bowling
Shepard Krech	Bob Price
Bill Bostian	Ed Phillips - <u>Staff</u>
Connie Lieder	

Hillsboro/Queen Anne

Ardath Cade, Ch.	Shepard Krech
Torrey Brown	Bob Price
Louise Lawrence	Charlie Davis - <u>Staff</u>

Kent County Amendments

Victor Butanis	Ron Karasic
Torrey Brown	Kay Langner
James Gutman	Charlie Davis - <u>Staff</u>

Talbot County

James Gutman, Ch.	Ron Karasic
Shepard Krech	Bob Price
Wally Miller	Charlie Davis - <u>Staff</u>