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# The Critical Areas Legislation: A Necessary Step to Restore the Chesapeake Bay

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by Senator Gerald Winegrad

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**T**he Chesapeake Bay is the most productive estuary in the world. In the U.S., the bay's production is exceeded only by the catch from the Atlantic and Pacific Oceans. Called a "protein factory" by the late H.L. Mencken, the bay annually produces one-half of this nation's blue crabs and soft-shell clams and one-third of its oysters. The bay's commercial and recreational fisheries generate over \$1 billion annually in economic activities. But the Chesapeake Bay is experiencing significant declines in many of its fisheries. The most valuable commercial and recreational fish, the rockfish or striped bass, is not successfully reproducing. Maryland has closed this fishery in its portion of the bay. It is illegal to possess or sell rockfish in Maryland. Maryland's oyster catches are at record lows. The shad fishery in Maryland has been closed for over five years. On top of the decline in these fisheries, all species of bay aquatic plants have declined by 85 percent from 1950 levels.

To address this serious decline in Maryland's most valuable natural resource, Maryland Governor Harry Hughes introduced the comprehensive Bay Initiatives in the 1984 Legislative Session. The most controversial of the Bay Initiatives enacted during the 1984 General Assembly was SB 664, the Critical Areas Legislation.<sup>1</sup> This legislation was one of ten bills enacted to restore declining water quality in the bay and was part of a package that included over \$36 million in funding that was approved by the 1984 Legislature.

In passing SB 664 by overwhelming majorities in both Houses, the General Assembly found that:

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; and . . . the Chesapeake Bay and its tributaries in Maryland are particularly stressed by the continuing population growth and development activity. . . .<sup>2</sup>

Each of the 17 bay counties is required to adopt a program regulating development in a 1,000 foot zone around the bay and her tidal tributaries that will:

- (1) Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or conveyances or that have run off from surrounding lands;
- (2) Conserve fish, wildlife, and plant habitat;
- (3) Establish land use policies for development in the Chesapeake Bay Critical Area which accommodate growth and also address the fact that, even if pollution is controlled, the number, movement and activities of persons in that area can create adverse environmental impacts.<sup>3</sup>

The task of developing the Critical Areas Criteria, which are the basis for the adoption of local programs, was assigned to a 25 member Critical Areas Commission with a representative of each of the 17 bay counties. These criteria were developed after 16 public hearings, 16 Commission and 48 subcommittee meetings.<sup>4</sup> Both Houses of the Legislature approved a joint resolution adopting the criteria during the 1986 Session.<sup>5</sup> The affected counties now have up to 27 months to implement programs that meet the criteria.

## The Critical Areas Criteria Do Not Prohibit Growth in the Critical Area

A common misconception is that the criteria stop all or nearly all development in

the critical area. Based on conservative estimates, over 65,000 more housing units could be developed in the 1,000 foot critical area around the bay not including individual lots that are already platted and therefore grandfathered under the criteria. These latter lots could be developed with single family structures, even at high densities, if they were approved before December 1, 1985. This will add thousands of additional units that can be developed to the previously mentioned 65,000 units. Also remember that over 72,500 acres in the critical area are already developed.<sup>6</sup>

The most controversial aspect of the criteria limits development to a density of one unit per twenty acres in the Resource Conservation Area (RCA) which is one of three classifications for existing land use around the bay. The RCA is composed of forests, wetlands, agriculture and open-space with an existing developed density of less than one unit per five acres. The one unit per twenty acres limitation does not apply to Intensely Developed Areas (greater density than four units per acre) or to the Limited Development Areas (density ranging from one unit per five acres to four units per acre). Because of the allowances for development of 2½% of the RCA, and even at the one unit per twenty acres zoning, over 32,500 more housing units can be developed in the RCA's around the bay. Again, this does not include the thousands of additional units that would be allowed under grandfathering provisions.

Interestingly, several Maryland counties have acted to slow the loss of farmland by resorting to a one unit per 20 acres or less dense agricultural zoning: Anne Arundel and Carroll counties, 1 per 20; Montgomery and Calvert counties, 1 per 25; and Baltimore County, 1 per 50.

The Commission has done a remarkable job in balancing the needs to provide protection for the bay in the 1,000 foot zone

while accommodating growth as the Legislature required. The Commission, in response to public and legislative comment, made significant modifications in the criteria including revising the original recommendation of 1 unit per 50 acres in the RCA to the present 1 per 20.

In addition to the one unit per twenty acres requirement in the RCA, two of the most significant aspects of the criteria adopted by the Commission are the forest and soil protective measures. No more than 20% of any forest may be developed and that must be replaced on an equal area basis. An additional 10% of the forested area may be cleared but must be replaced at 1.5 times the area cleared. With the exception of cutting for personal use and other limited exceptions, cutting of trees within fifty feet of the bay or tidal tributaries is prohibited. Also, formal forest management plans approved by the Department of Natural Resources are required for timber harvests of one acre or more anywhere in the critical area.<sup>7</sup>

Approved soil and water conservation plans are to be implemented within five years on all farms in the Critical Area. Until such a plan is approved and implemented, a twenty-five foot vegetated filter strip must be maintained on all farms along the bay and her tributaries.<sup>8</sup> Development, timber harvesting and agriculture are all permitted in the Critical Area but only under the guidelines in the criteria.

Each county and municipality must adopt its own program for approval by the Commission and, on approval, the local subdivision will administer the program. The criteria were adopted to meet the dual statutory directives of protecting the bay and accommodating growth, a difficult balancing task. If a county fails to adopt and implement an approved program to meet the critical area criteria, the Critical Areas Commission may act for the county in doing so.

### **Why Was It Necessary To Adopt the Critical Area Criteria?**

The \$27 million, six year U.S. Environmental Protection Agency study documented the serious decline of the living resources and water quality of the Chesapeake Bay. The adverse impacts of the conversion of forest and fields to built-up uses were documented in this study. The Patuxent River Nutrient Control Strategy, developed in 1982, found that "population growth and related land use change are the fundamental cause of point and non-point pollution." The Land Use Work Group leading up to the 1983 Bay Conference ratified this finding. Without

proper land use, Maryland's three year commitment to date of \$130 million and 272 new positions for the bay clean-up may prove fruitless.

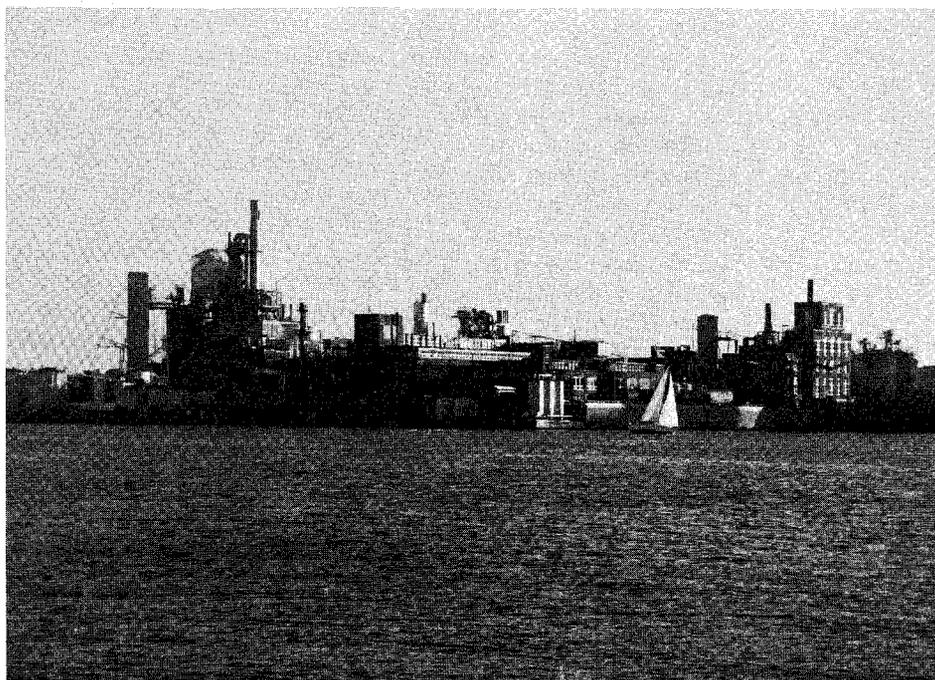
The criteria are designed to create a 1,000 foot buffer around the bay where only environmentally sensitive development may occur. The development of criteria was based upon six considerations.

(A) Forty-two percent of the undeveloped land in the critical area is forest land. Forests are the most beneficial land use for water quality. Forest land breaks the erosive impact of rainfall, allows for natural infiltration, purifies rainfall of pollutants, holds the soil and greatly reduces nutrient flows to the bay. Phosphorous and nitrogen flows increase exponentially where forest land is converted to developed uses. Maryland's forests have been converted to development at an alarming rate—over 90% of Maryland was forested in 1634 at settlement; today less than 40% remains forested. Certain key watersheds have lost large amounts of forest land. The Patuxent and the upper bay both have lost over 21% of their forest cover from 1950 to 1980. This loss has continued and with it an ever increasing flow of nutrients, toxics, sediment, and stormwater. It is clear that to protect the water quality of the bay we must protect the forest surrounding the bay. The criteria would minimize the loss of forested areas in the 1,000 foot critical area around the bay and her tidal tributaries.

(B) Thirty-seven percent of the undeveloped land in the Critical Area is agricultural land. The criteria require all farms to be under a soil and water conservation plan to protect bay water quality. The conversion of this farm land, with its required twenty-five foot filter strips and other best management practices, will result in increased stormwater, toxic chemicals and nutrient flows. This would occur as properly managed farm land is converted to parking lots, curbs, gutters, streets, and other impervious surfaces.

(C) Increases in phosphorous and nitrogen flows into the bay. When new homes and commercial establishments are built in the critical area and hooked into sewage treatment plants, there will be significant increases in phosphorous and nitrogen flows into the bay which have been identified as a prime cause of the decline in water quality. In fact, such nutrient loadings increase by factors of fifteen to seventy times when forest land is converted to residential development and the homes are sewered.<sup>9</sup>

(D) Failure to exercise planning and zoning powers. With some exceptions, the counties and municipalities have not exercised the planning and zoning powers so as to protect the loss of forests, farm land, and non-tidal wetlands directly around the bay and her tributaries. In fact, the counties compete with one another to foster the growth that has contributed to the decline of the bay. From 1900 to the present, over



40% of Maryland's 500,000 acres of wetlands were lost; from 1949 to the present over 1.4 million acres of farm land have been lost in Maryland. The state acted in 1970 to prevent the loss of wetlands with the Tidal Wetlands Act but non-tidal wetlands are still being filled. Without state action, the conversion from beneficial land uses in the 1,000 foot zone would undoubtedly continue.

(E) Counties' and municipalities' failure to enforce sediment control law. Many of the counties and municipalities have not adequately enforced and administered the state sediment control law<sup>10</sup> enacted in 1971 to protect water quality. In 1985, fourteen of Maryland's 24 counties were denied the continued enforcement of this basic law or did not apply to the state to continue enforcement. Even with the concern over the bay, the state was forced to take over the sediment control programs in 14 of 24 subdivisions. It remains to be seen how effectively Maryland's stormwater management law<sup>11</sup> will be administered and enforced by the counties although most counties appear to be adequately complying. The Critical Areas Criteria require stringent sediment control and stormwater management for new construction in the Critical Area which should boost the effectiveness of these programs and help protect water quality.

(F) Significant population growth in Critical Area counties. Many of the Critical Area counties are experiencing significant population growth with even greater growth in the number of housing units. The following chart shows the growth rates in five bay counties:

County	Population Increase 1970-1980	Housing Unit Increase 1970-1980
Anne Arundel	24.4%	44.9%
Queen Anne's	38.5%	46.0%
Calvert	67.5%	61.1%
Charles	52.6%	67.3%
Talbot	8.1%	23.8%

The annual rates of population growth in some Maryland bay counties such as Anne Arundel, Queen Anne's, Calvert and Charles exceeds that of most third world nations experiencing rapid population growth such as India, Sudan, Mexico and Indonesia!<sup>13</sup> The projected population in the bay drainage basin is projected to double from 1980 to the year 2020. In Maryland, much of this growth will be in the bay counties. Although Maryland's population grew by 7.5% from 1970 to 1980, the number of housing units grew by 25.7% reflecting smaller household sizes. Also exacerbating the loss of forest,

and wetlands around the bay, people moved from Baltimore City, Washington, D.C. and other urban centers to more rural lands. The Critical Area Criteria will serve to mitigate the environmental impacts of this population growth and proportionately greater construction of housing units in the 1000 foot zone.

### The Future Under the Critical Areas Legislation

The counties must implement the criteria by late 1988. Unless the Critical Areas criteria are implemented in a spirit of mutual cooperation, we may be wasting the \$130 million that Maryland has committed to the bay's restoration in the last three years. We must seriously begin to examine the effectiveness of local planning and zoning, not just in the Critical Area but in the entire state. This will allow the protection of our resource base and rich natural heritage and prevent a serious decline in the quality of life. On reflection, it is unfortunate that the state had to act to assure environmentally sensitive land use decisions in the most sensitive lands around the bay. The Secretary of State Planning has recently warned that without significant changes in growth management, the amount of Maryland's developed land would triple in 50 years and the remaining land would be insufficient to support farming or wildlife.<sup>14</sup> Also of great importance to the taxpayer are the costs of local land use decisions on the infrastructure resulting from sprawl. A recent study by the American Farmland Trust<sup>15</sup> found that for every \$1 in additional tax revenue generated by new residential development in Loudoun County, Virginia, \$1.28 in services are required.

Unless population growth is slowed and eventually held constant by public policies, including planning and zoning changes, the resultant land use conversions from forest and agricultural land to development and the increased wastewater flows will almost certainly exacerbate existing water quality problems in the bay and her tributaries. This may occur despite the expenditures of tens of millions of dollars in implementing the bay initiatives.

The Critical Areas criteria are but a beginning in trying to resolve the difficult policy question of land use and population growth and dispersal. Unless we act to review local land use practices and deal with population growth and dispersal, we may never again see a Chesapeake teeming with rockfish, shad, herring, soft shell clams, oysters and bay grasses. Our choices today will effect the ability of future generations

to enjoy Maryland's greatest natural resource.

#### Notes

<sup>1</sup>MD. NAT. RES. CODE ANN. § 8-1800 (1984).

<sup>2</sup>MD. NAT. RES. CODE ANN. § 8-1801 (1984).

<sup>3</sup>MD. NAT. RES. CODE ANN. § 8-1808(b) (1984).

<sup>4</sup>The Criteria were adopted as regulations, See MD. ADMIN. CODE tit. 14 § 15.01 to 14 § 15.11 as proposed in 12.20 Md. R. 1953-1977 and amended in 12:24 Md. R. 2352-2354.

<sup>5</sup>Joint Resolution 36 (HJR 17) and 37 (SJR 9), 1986 Md. Laws 3578.

<sup>6</sup>These figures for the amount of units and the developed average were derived by the Critical Areas Commission in prepared charts.

<sup>7</sup>MD. ADMIN. CODE tit. 14 § 15.02.04 (1985).

<sup>8</sup>MD. ADMIN. CODE tit. 14 § 15.06.03 and 15.09.01 (1985).

<sup>9</sup>Choices for the Chesapeake, Workshop Recommendations, p. 23, October, 1983.

<sup>10</sup>MD. NAT. RES. CODE ANN. § 8-1101 (1983).

<sup>11</sup>MD. NAT. RES. CODE ANN. § 8-11A-01 (1983).

<sup>12</sup>U.S. Bureau of Census (1980).

<sup>13</sup>Population Reference Bureau (1986).

<sup>14</sup>See generally Department of State Planning, Land Use or Abuse (1985).

<sup>15</sup>See generally American Farmland Trust, Density Related Public Costs (1986).

#### SENATOR GERALD WINEGRAD

is an attorney with a J.D. from the University of Maryland School of Law (1969). He has served in the Maryland Legislature for eight years representing the Annapolis area. He is a member of the Tri-State Chesapeake Bay Commission, the Joint Oversight Committee on Critical Areas, and the State Water Quality Advisory Committee. He has received numerous awards for his environmental work, most recently the Potomac Chapter of the Sierra Club's Environmentalist of the Year Award. Senator Winegrad serves on the Senate Judicial Proceedings Committee.

