

THE MARTHA'S VINEYARD COMMISSION

BOX 1447, OAK BLUFFS, MASS. 02557. 693-3453

DECISION OF

THE MARTHA'S VINEYARD COMMISSION

DESIGNATING THE OAK BLUFFS
SENKONTACKET POND DISTRICT

AS A

DISTRICT OF CRITICAL PLANNING CONCERN
MARCH 4, 1976



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617-693-3453

DECISION OF THE MARTHA'S VINEYARD COMMISSION
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Section 1.00 General

As authorized by Chapter 637 of the Acts of 1974, as amended by Chapter 759, of the Acts of 1974 ("the Act"), the Martha's Vineyard Commission ("the Commission"), hereby designates as a District of Critical Planning Concern ("a District"), the specific geographical areas hereafter described, to be known as the Oak Bluffs Sengekontacket Pond District ("the Pond District").

The Commission held public hearings on February 26, 1976, the original hearing having been rescheduled at the request of a major landowner in the area, at the Commission offices, Olde Stone Building, New York Avenue, Oak Bluffs, Massachusetts on the proposed Island Properties, Etc. and Major's Cove Wildlife/Open Space Districts, after due public notice to the municipalities, publications, and Massachusetts General Laws, Chapter 30A, Section 2. The hearings were held as required by the Act to permit the Commission to receive testimony relating to whether it should designate specific geographic areas within the proposed Districts on Martha's Vineyard as a District of Critical Planning Concern.

Testimony was received at the public hearing, and received by the Commission before 5:00 p.m., March 1, 1976, in opposition to and in favor of the designation of this area as a Critical District. A list of such persons testifying, and the written testimony which was received by the Commission, is appended hereto in Appendix B.

The Commission received a nomination ("the Island Properties") by taxpayer petition from Pare Lorentz and others for inclusion of geographic areas into a District. At its meeting of January 8, 1976, the Commission itself nominated and accepted for consideration a proposed District called the Major's Cove Wildlife/Open Space District. The nomination received by the Commission from taxpayers, and the Commission nomination itself, relating to the proposed

Districts of Critical Planning Concern are appended hereto and marked "A". Copies of all nominations and documents relating thereto and the areas accepted for consideration are incorporated herein and are on file at the Commission offices, Olde Stone Building, New York Avenue, Oak Bluffs, Massachusetts.

The Commission accepted for consideration and modified the boundaries of the Island Properties nomination on January 8, 1976. On the designation of the Oak Bluffs Sengekontacket Pond District on March 4, 1976, the Commission consolidated the Major's Cove Wildlife/Open Space Nomination and the amended Island Properties nomination into this District, and further amended the District boundaries to its present area, as designated.

The Commission did not designate the lands and waters within the Town of Edgartown because the Commission is considering the possible nomination of the entire area adjacent to Sengekontacket Pond at a later date and because of extensive replanning of the area around Major's Cove now contemplated by landowners.

Section 9 through 11 of the Act provide the process for amending the boundaries, adoption of development guidelines, and regulations of the District to which development must conform.

Section 2.00 Area Designated

Upon consideration of information submitted to it, the Commission's familiarity with lands and waters of the District, site visits, written testimony, and pursuant to the Act and Commission's Standards and Criteria for Districts of Critical Planning Concern ("the Qualifications") adopted under the Act and appended hereto and marked "C", the Commission makes findings herein and hereby designates the Pond District, essentially including those lands and waters lying adjacent to Sengekontacket Pond within the Town of Oak Bluffs, and more particularly defined as follows:

The lands and waters bounded by a line beginning at the intersection of the Vineyard Haven/Edgartown Road and County Road; thence northerly along County Road to the southern boundary of the Oak Bluffs Airport property; thence easterly along this property boundary and northerly along the eastern boundary of said Airport until its inter-

section with the ten-foot (10') contour (indicated on U.S.G.S. maps as the line demarcating those lands and waters lying above ten-foot (10') elevation above mean sea level); thence northerly and easterly along the ten-foot (10') contour line to its intersection with Beach Road; thence southerly along the Beach Road to the first bridge; thence along the mean low water mark of Sengekontacket Pond to its intersection with the Edgartown - Oak Bluffs boundary line; thence westerly along said town bound to its intersection with the Martha's Vineyard State Forest and the New Bedford Gas and Edison Electric Company power line; thence north and easterly along said power line to the Vineyard Haven-Edgartown Road; thence north and westerly along this road to the point of origin.

The Commission has prepared a descriptive map appended hereto as "D" for the general information of the public and municipalities. The boundaries of the Pond District, however, are as set forth above in this Decision and shall control over any map.

The Oak Bluffs Sengekontacket Pond District boundaries conform to Qualification Section 1.20. The Commission finds that the lands and waters therein reasonably belong within the Pond District. Lands and waters in this District are a critical area and the Commission finds that this area needs protection afforded by the Act. The areas designated are a logical planning area and are suitable for the adoption of coordinated regulations for the District as a whole. Finally, the Commission finds that the boundaries of the Pond District, as established, are both convenient and recognizable.

Section 3.00 Why the Area Has Been Designated

When designating a District, Section 9 of the Act requires the Commission to specify why the area is of critical concern to the region, the problems associated with uncontrolled or inappropriate development, and the advantages to be gained by the development of the area in a controlled manner. In designating a District, the Commission must also consider the need for designation, as required by Section 1.10 of the Qualifications. Information available to the Commission supports a finding that the Pond District is of regional importance, that there exist problems of uncontrolled or inappropriate development within the District, and affecting areas outside the District, indeed the entire Island, and that there are advantages to be gained by development of the area in a controlled manner. The Commission specifically finds that controlled development of lands and waters within

the Pond District is essential to the prevention of pollution of ground and surface waters, the protection of water quality, and to preserving an adequate water supply. In addition, lands and waters within the Pond District contain, support and affect important wildlife habitats. They are essential to marine and shell fishing within and affected by activities in the District, each of which is vital to the Island's economy. Traffic generated by development within this District will adversely affect the safety and welfare of Island residents and visitors. Development will probably overburden the ability of the Town to supply essential public services to present and future residents. Furthermore, this area contributes substantially to the Island's unique cultural, historic, and economic values. This area offers irreplaceable views and there exist in the District important outdoor recreational opportunities. As fragile resources, lands and waters within the District are extremely sensitive to pollution, and the destruction of irreplaceable resources.

The Commission finds that development within the District must be controlled to prevent harm to the public health, safety, and general welfare of persons who might undertake such development and to present and future Island residents and visitors.

In considering the problems of inappropriate or uncontrolled development within the Pond District, the Commission finds that so fragile are these lands and waters and the values they create and support that to maintain and enhance the health, safety and general welfare of Island residents and visitors, and for present and future generations, special development controls within the District must be adopted.

In considering the advantages to be gained by development in a controlled manner, the Commission finds that development which conforms to regulations to be established pursuant to the guidelines adopted by this Decision will contribute much to solving the problems of uncontrolled or inappropriate development.

The Qualifications require the Commission to address itself to the need for designation. To that end, the Commission finds there exists a regional need for special regulations and planning to protect the Island and its people from damage and loss resulting from inappropriate development. The Commission also finds after its review that present private and public regulations in a substantial part of the District cannot assure protection, and that damage to the Pond District lands and waters, or lands and waters affected by District activity, or impediments to proper development, will be a substantial loss to the region or to two or more towns on the Island.

Section 4.00 What Kind of District

Section 9 of the Act permits the Commission to designate a District only in accordance with the Standards and Criteria approved under the Act. Such a District may be designated only for:

- (a) an area which possesses unique natural, historical, ecological, scientific, or cultural resources of regional or statewide significance;
- (b) an area which possesses marginal soil or topographic conditions which render it unsuitable for intense development; or
- (c) an area significantly affected by, or having significant impact on, an existing or proposed major public facility or other area of major public investment.

The Pond District qualifies under the Specific Qualifications Section 2.00 - 2.80 of the Criteria and Standards (the "Specific Qualifications"). The Commission finds that the Pond District meets Specific Qualifications as described herein.

Specifically, with respect to the first element of Section 9 of the Act, concerning unique natural, historical, ecological, scientific, or cultural resources of regional or statewide significance, the Pond District meets the Specific Qualifications of the Fishing Resource District, Section 2.20; the Wildlife, Natural, Scientific or Ecological Resource District, Section 2.40; and the Cultural or Historic Resource District, Section 2.50.

As to the second requirement that the area contain marginal soils or topographic conditions, the Pond District meets the Specific Qualifications of the Hazardous District, Section 2.80, and the Drinking Water Resource District, Section 2.10. Finally, because the Pond District meets the Major Public Investment District Qualifications, Section 2.70, the Pond District also meets the third requirement of Section 9 of the Act.

Section 4.10 Compliance with Criteria and Standards

4.11 Drinking Water Resource District

As stated in the District Qualifications, an area must be important to the protection of a regional aquifer, recharge zone or surface supply in order to be accepted as a Drinking Water Resource District. Development within the District is situated just south of a town supply well and will require an increase in water consumption and pumping rates and durations which may total as much as 40 percent of current consumption. It is not the capacity of the town wells to supply this development over the short run which causes concern but the uncertainty of the impact of greatly increased demand over an entire summer. The possibility of contamination of the ground water is discussed under the Hazardous District section.

Development within the District will rely on the Town of Oak Bluffs water supply system to meet its needs. This system consists of two well sites with a total available yield of 2.2 million gallons per day as described in the staff testimony, Appendix B. The 843 units proposed would increase the total number of hookups by 38% from its 1974 level of 2200. Nearly all units, it is expected, will make their demands on the supply system through the summer months. During this portion of the year, evaporation and transpiration losses from the water table exceed gains from infiltration of rainfall without considering the demands of human consumption. The water table would slowly decline by this natural process alone even without additional demands.

In the various testimonies presented to the Commission during its consideration of the area, much conflicting information was presented. It would seem that the central supply issue is not whether the town supply system can furnish the additional water required for the development on a short term basis, for obviously it can, rather what the impact of this demand would be when carried through an entire summer. The conflicting estimates and reports only serve to bolster the conclusion that the aquifer and its response to our water requirements is relatively unknown. For this vital understanding, we must await the completion of an United States Geological Survey Water Study to be undertaken over the next three years. Until this study is completed, we cannot draw definitive conclusions but only raise the uncertainties which make control of the rate of development and demand on water supplies all the more vital. The issues can be summarized as follows:

4.111 How much water will be required?

In their report, GHR Engineering Corporation¹ estimates approximately 150,000 gallons per day are required to supply this development. This is based on an estimate of 3.5 persons

¹ GHR Engineering Corporation (1976) Waterview, Martha's Vineyard.

per unit, consuming 50 gallons per day (gpd). However, Metcalf and Eddy² estimate summer seasonal house occupations at 5.6 persons per unit³ which would call for 236,040 gpd. Furthermore, Metcalf and Eddy³ estimate 170 gallons per capita per day water consumption in the town of Oak Bluffs. Although this figure includes non-residential use, leakage and fire demands, it is believed that the 50 gpd estimate may well be low.

It must also be remembered that very little of the water delivered to the new development will find its way back to the supply area. This will occur because the development is so situated that septic effluent recharging the watertable will flow directly to the pond.

GHR⁴ also reports that only a 17% increase in consumption would result. Using 5.6 persons per unit summer and 2.8 persons per unit winter with only 10% of the units occupied in winter and 50 gpd per person, a total yearly consumption of 59 million gallons results.

This would require an approximate increase of 40% in total water consumption; the largest portion of this demand would occur during the summer season.

4.112 Potential impact of increased water demands.

Metcalf and Eddy⁵ project 1980 average and peak summer day demands as 1.38 mgd and 2.58 mgd respectively. The proposed development would increase those requirements to 1.62 average and 2.9 mgd peak. This would indicate an increased demand of approximately 17% in 1980 and would require longer duration pump rates with an unknown consequence. It is once again not a question of whether the pumps can deliver the water but rather what impact would result from a pump rate averaging near the estimated safe yield of the wells.

In deciphering the characteristics of the aquifer, GHR⁶ reports no drawdown observed 500 feet from the Farm Pond well site when pumping at its capacity, 1 mgd. Yet, Whitman & Howard⁷ reported that after 7 days of pumping a group of five 2 - ½ inch wells at 250 gpm (which simulates the action of a 24 inch gravel packed well) an observation well situated only 100 feet away did show a drawdown and another observation well situated in the group being pumped was drawn to a depth of one and one half feet below mean sea level and required four days to completely recover its former static level. This seems to indicate that the aquifer can be deformed to an unknown extent

2 Metcalf and Eddy (1970) Seasonal Population and Housing; preliminary Study Report No.4

3 Metcalf and Eddy (1972) Comprehensive Water and Sewerage Plan

4 GHR (1976) Op Cit

5 Metcalf and Eddy (1972) Op Cit

6 GHR (1976) Op Cit

7 Whitman and Howard (1958) Reprot on Waterworks System Oak Bluffs

and with unknown consequences when required to pump near capacity for long periods of time.

In response to the possibility of drawing septic contaminated effluent or salt water into the Farm Pond well site due to substantially increased and maintained pump rates, the GHR report indicated the lack of drawdown at a 500 foot distance. However, Dr. Arthur Strahler⁸ has shown that at the average pump rate for the year (.4 mgd to allow 146 mg/year) the radius of a circle within which water will be drawn to the well is approximately 2100 feet. At the maximum pump rate of 1 mgd this circle expands to 3400 feet and would encompass a portion of Farm Pond a tidal salt pond as well as a large tract of residential development. Mr. Pittendreigh, an engineer for the town felt that salt intrusion even at maximum pump rates was not likely. He felt the elevation of the water table and the distance between the well and the nearest salt water body was sufficient to exclude that possibility.

It is believed that although no drawdown was reported at a distance of 500 feet under maximum pump rates, a more substantial drawdown extending over a larger area might result from maintaining this pump rate over the entire summer season. This effect would be magnified during the summer when very little excess water is recharging the water table. While this difficulty may be overcome by the emplacement of a new source of supply, it is felt that the rate of development should not be allowed to outpace the collection of information on the systems capacity and the normal expansion of the towns supply system.

Section 4.12 Fishing Resource District

In order to qualify as a Fishing Resource District under Qualification Section 2.20, the Commission must find that "The water body in the district is particularly well suited for the production of shell or fin fish or can be made productive through good management or improvements".

Analysis of the Reports of the Shellfish Constable in the Oak Bluffs Annual Reports for the past five years indicates that the area under consideration is a rich shellfishing area:

1975 (information obtained from Lawrence J. DeBettencourt, former Shellfish Constable for the Town of Oak Bluffs) shellfishing figures indicate that approximately 629 bushels of scallops were taken from Sengekontacket Pond under Commercial shellfishing licenses and 276½ bushels were taken under family permits.

8 A.N. Strahler (1972) The Environmental Impact of Ground Water Use on Cape Cod

Of the 886½ bushels of quahogs taken, approximately 550 bushels were taken from Sengekontacket Pond and were worth approximately \$11-12,000. About 2000 pounds of eels were taken in the pond, valued at approximately \$900.

This is an increase from the 1974 figures listed in the Annual Report. In 1973, 626 bushels of scallops were taken from Sengekontacket, and a majority of the 334 bushels of quahogs also came from the area. The figures were an increase from the amounts listed in the Report of the Shellfish Warden published in the 1972 Annual Report of the Town of Oak Bluffs. The figures listed in the 1971 Shellfish Warden's Report list 90 bushels of quahogs taken under family permits and 32 bushels taken under commercial permits. 14 bushels of clams were also taken that year.

Generally, it can be seen that there is an increasing yield annually from the area. This indicates that it is a viable shellfishing area, and could support increasing shellfish populations with continued management & continued seeding.

Management consists of the seeding of the Pond with seed and littlenecks. This is shown on the map on the following page. Contemplated dredging of the Pond is also expected to increase yields. The seeding program also indicates the importance of extending the boundary of the area under consideration from the area nominated along the western shore of the Pond to the area along the northern shore as well. These are all areas under shellfish management, and should be included within the proposed district to assure adequate protection of present shellfishing efforts in the area.

Mention must also be made of the finfishing within the pond and along the openings connecting Sengekontacket Pond to Vineyard Sound. Fishermen are frequently seen fishing in the area, especially during the annual Bass Derby. Increased eel yields in the Pond also indicate the viability of this enterprise within the area.

Even with the limited information presented in this section, it can be seen that the Pond and the contiguous area buffering the pond, comprise an important fishing and shellfishing resource of the Island. The water quality of the Pond must be maintained in order to effectively use this resource, and continued management of the area must be supported. There can be little question that the area under consideration would qualify as a possible Fishing Resource District under the criteria and standards adopted by the Commission and approved by the State.

Section 4.13 Wildlife, Natural, Scientific or Ecological
Resource District

The requirements of Section 2.40 of the District Qualifications states that an area may be designated a Wildlife District if "the district contains an important and identifiable wildlife, natural, scientific, or ecological resource" and the area would be critical "because development may disrupt the ecological balance".

In 1973, the Vineyard Conservation Society undertook a study of the major wildlife habitats on Martha's Vineyard, and developed maps and a report entitled Important Wildlife Habitats of Martha's Vineyard. Areas were categorized as Prime Areas and Major Habitats, Key Areas of Small Size, and Smaller Areas or Areas in Conservation. The Sengekontacket Pond area was designated as a Prime Area (one of six such on the Island). The report reads in part as follows:

"Sanchacantacket" was one of the ways of spelling the name of the great pond which lies between the town of Oak Bluffs and Edgartown, and within the boundaries of both townships. Today, the usual spelling Sengekontacket also called "Anthier's Pond". However, this is used more by Island families. Both historically and today this area has been of vital importance to wildlife systems on the Island.

Sengekontacket's two openings render it a tidal pond. There are four islands within the pond: Big Gravel Island, Little Gravel Island, Brush Island, and the largest -- Sarson's Island. The first three are located close together at the northeast end of the pond, while Sarson's Island is in the center, between Felix Neck and the Edgartown Bridge. The pond has a very irregular shoreline with many points of land, tidal marshes and coves, a barrier beach at the eastern boundary, and areas where the fresh water lens drains into the pond, forming cattail swamps. It is this great diversity of habitat that produces the great variety of wildlife in and around Sengekontacket.

Fish, shellfish, waterfowl, certain mammals, and upland game birds are resources of the land and water. They can be harvested for commercial use or used for sport when they are properly managed. Sengekontacket, perhaps more than any other Vineyard pond, is utilized by commercial shellfishermen, sport fishermen, waterfowl hunters, upland game hunters, bird watchers, and naturalists. It is probably used in every conceivable manner and yet it still remains a great refuge area and breeding ground for many species of wildlife.

The two main reasons for Sengekontacket's large concentration both numbers and species of waterfowl are its rich abundance of food and the circumstantial effects of the tidal flow. The severest of winters find Sengekontacket with open water; the constant exchange of high and low tides keeps a channel of open water on the eastern side of Sarson's Island which runs northeasterly to the Oak Bluff's Bridge. In order for waterfowl to spend the winter, they must have open water in which to feed. As the ponds on the south side of the Island ice up, the large number of waterfowl must either migrate further south or seek out local open water in which they can feed. For this reason it is a spectacular sight to see the large concentration of birds in Sengekontacket.

The combination of Sarson's Island as a migratory bird refuge and the Felix Neck Wildlife Sanctuary being protected from hunting helps to form a perfect refuge system. In these areas the birds may feed and rest undisturbed. When the bird's range extends from these areas they are subject to wildfowl hunters. It is evident that we have a balanced and well managed resource, one that is protected in one spot and harvested in another.

The importance of Sarson's Island cannot be over-emphasized. Common and Least Terns nest there and Great Blue Herons nest and feed along its shoreline. Many species of shorebirds feed on the surrounding sand flats. Last spring a pair of Canada Geese nested on Sarson's Island. Black Ducks breed there and there is a large colony of Herring Gulls. River Otter breed on Sengekontacket's shores and Ospreys hunt its waters."¹

Thus it can be seen that the District encompasses a portion of this rich wildlife area. The Dodger's Hole area is also partly within this District. This area is also valued as a unique natural area and possesses unusual vegetation.²

The requirements of this Specific Qualification have been met, and the District can be seen to incorporate land and waters having a significant impact on the ecology of the entire Sengekontacket Pond biome.

1 Vineyard Conservation Society, Important Wildlife Habitats of Martha's Vineyard (1973) pp.2-4

2 Pratt, Oak Bluffs Conservation Commission, (1975) Oak Bluffs Open Space Report p.44 .

Section 4.14 Cultural or Historic Resource District

The Pond District would meet the Specific Qualification 2.50 for a Cultural or Historic Resource District. The area is a rich wildlife area offering excellent hunting opportunities, especially for waterfowl; it also offers an excellent fishing resource for both fin and shellfishing.¹ These would be traditional activities which would meet the requirements of Specific Qualification 2.504.

The Beach Road, connecting the town centers of Oak Bluffs and Edgartown and giving access to the State Beach, is one of the most heavily travelled roads on the Island.² Moreover, a major bike path has just been completed paralleling this road. The large number of people, bicyclists, pedestrians, and automobile passengers, who use this road have an unobstructed view of both Vineyard Sound and across Sengekontacket Pond to the Oak Bluffs shoreline. Presently, this shoreline has scattered dwellings visible from the road. The open space provided by the golf course and Felix Neck supports the feelings of spaciousness offered by this important view. Where public vistas are available across the ponds from public roads, the views incorporating the land, the pond, and the sea are the most pleasant and memorable the Island has to offer and easily altered by incompatible development. Intense development of this area would change the quality of this landscape, as viewed from one of the most frequented and heavily travelled areas of the Island. The concept of transition from one densely populated town center in Oak Bluffs to another in Edgartown will be permanently altered by visually obtrusive, relatively intense development within the District. The feeling of passage from one area of unique character to another such area would be affected by the visual intrusion of a pattern of development alien to traditional Island settlement patterns (of higher densities in the town centers and scattered, low density in the outlying areas).

The effects of development within the Pond District will also adversely affect the character of the surrounding Towns, and the Island as a whole. Traffic generated by intensive development of the District will spill into the already traffic jammed town centers. So great is the present automobile congestion in these areas, that the Town of Oak Bluffs has employed a transportation planning consultant, who has done a parking and transportation circulation study for the Town.³

1 Vineyard Conservation Society, Major Wildlife Habitats, Martha's Vineyard (1973)

2 1973, Traffic Count map prepared by Dukes County Planning and Economic Development Commission.

3 Vorhees & Assoc. 1975, Oak Bluffs Central Area Traffic & Parking Study

The Towns of Tisbury and Edgartown have also formed Traffic Committees to deal with the rising problems of vehicular congestion.⁴ This vehicular traffic will turn the quaint and traditional character of these Towns into a traffic-clogged and congested shopping and service area and may foster commercial sprawl on the outskirts of the town centers.

The erosion of the character and visual qualities of the District, and surrounding area, can be met by continued planning by the Towns. Policies can be adapted, studies done, and data gathered to channel growth and transportation into modes which would preserve and enhance the unique character of the Vineyard for present and future generations, Island resident or visitor.

Section 4.15 Major Public Investment District

The District would qualify as a Major Public Investment District for several reasons. The improper development of this area could significantly impact the transportation facilities, public facilities and fishing resources of the Island.

4.151 Transportation

The transportation system linking the District to the surrounding area is based on three major roads: County Road, the Vineyard Haven/Edgartown Road, and the Beach Road.

Traffic generation estimates conclude that at least one thousand round trips will be generated by proposed development within the District.¹ Comparisons of this traffic generation with estimated vehicle load capacity of the surrounding roads indicate significant increases in vehicular use. Beach Road, for example, is estimated to increase to 73% of its designed capacity.²

This increase in road traffic would impact surrounding areas. The Beach Road, which would be affected by development within the District, is also the only access to Joseph Sylvia State Beach. This road presently has safety hazards associated with off-road vehicular parking, conflicting uses of the road by pedestrian traffic, and the crossing of the road by bicyclists leaving the State bicycle path to use the State Beach facilities. Moreover, one of the major connectors from proposed development within the District crosses the State bicycle path, and can create conflicts where the access road crosses the bicycle path; this may significantly impact the use of the path by bicyclists as a result of the bicycle/automobile conflict at this point.

4 Town Reports (1974) for Tisbury and Edgartown.

1 U.S. Dept. of Transportation, Trip Generation by Land Use.

2 Testimony received March 1, 1976, GHR Engineering.

The town centers may also be impacted. All of the major roads surrounding the District lead to the town centers of Oak Bluffs, Edgartown, and Vineyard Haven. These towns already have severe traffic and parking difficulties. The Town of Oak Bluffs has undertaken a Parking and Traffic Study³ and the Towns of Edgartown and Tisbury already have created Traffic Committees to assist in the planning of these areas for traffic and parking.

4.152 Public Facilities

It is estimated that between one-hundred and two-hundred year round families will result from improper development within the District.¹ These new residents will be supported by the seasonal residents within the District, and will provide necessary services to the seasonal residents. These new year-round residents will require adequate housing, waste disposal, water supplies, and use of the proposed multi-town nightsoil treatment plant proposed for the Island. They will also require the use of State and regional facilities on the Island, such as the Regional High School. Without proper planning, the Island may be faced with an overburdening of its public facilities and resources.

4.153 Marine Fisheries and Shellfishing

Present efforts on all levels of government are directed towards enhancing and maintaining the viability of fishing and shellfishing in Sengekontacket Pond, which may be adversely impacted by improper development of the District. The regional planning agency is assisting the towns in a regional effort to obtain funds for a marine biologist to increase shellfishing yields in the ponds of Martha's Vineyard. Monies have been allocated by the Towns and application has been made for matching federal funds under a U.S. Department of Commerce, Economic Development Administration grant. This indicates that shellfishing management in Sengekontacket Pond would qualify as an area of future public investment, if the grant is accepted and approved. The protection of the present shellfishing resources is essential to protect this impending public investment.

3 Alan Vorhees & Assoc., Oak Bluffs Central Area Traffic and Parking Study (1975).

1 Komives, Relationship of Growth in Seasonal Housing to the Need for Year Round Housing on Martha's Vineyard, 1976, Martha's Vineyard Commission study.

4.16 Hazardous District

The units to be situated within the District will provide on lot sanitary disposal systems. Serious issues have been raised as to the ability of the soils in the area to adequately treat such septic system wastes, prior to their introduction to the groundwater. Although the GHR Report¹ cited a favorable Soil Conservation Service statement regarding the slight limitation of the soils for septic systems, it failed to quote the following paragraph which indicated that shallow wells situated near septic systems in soils of² this type might be contaminated with septic effluent.² This raises a key issue regarding the maintenance of high quality ground and surface waters in the District. This issue centers around the question, "Can rapidly permeable soils offer adequate treatment of septic wastes?".

The GHR Report discounts the dangers of too highly permeable soils to treat effluent sufficiently, yet the State of Pennsylvania deems that soils with percolation rates faster than 5 minutes per inch are unsuitable for septic system installation.³ The percolation rates of the area are all less than 2 minutes per inch -- this is three times faster than that which is considered acceptable under Pennsylvania standards.⁴ Furthermore, the Soil Conservation Service limitations for Evesboro sand are based on lot sizes of approximately $\frac{1}{2}$ acre.⁵ Although the overall lot size of proposed development in this District is approximately $\frac{3}{4}$ acre (including the golf course and open spaces), actual lot sizes are approximately $\frac{1}{4}$ acre for many of the lots. There are many of these small lots which are not buffered from the pond by a protective open space zone.

The GHR Report cited USPHS studies which indicated an 85% reduction in concentration of septic-effluent contaminants on passage through a 5-foot vertical distance of sandy soils. Yet, numerous studies support the contention that both chemical and bacterial/viral contaminants may travel the expected vertical distances between grade and water table at this site and the horizontal distance between disposal systems and the Pond.⁶ Other studies have shown that the 25-foot separation between leaching field and a source of non-potable water is insufficient.⁷ Dr. Ward Motts found that only a horizont-

¹ \ Testimony, GHR Report, 1976.

² \ SCS, Soils and their Suitability for Various Land Uses.

³ \ Penna. Department of Health Regulations. c. 73, Standards for Sewage Disposal Facilities, Section 73.63.

⁴ \ GHR Report, Testimony.

⁵ \ SCS, op. cit.

⁶ \ Staff Testimony, Appendix A, Tables 2,3;Figs.,3-6.

⁷ \ Motts, Ward. (1976), Recommended Modification of Mass.

al setback of 200-300 feet would offer adequate protection of lake waters from eutrophication.

The GHR Report cited that, based on 23 inches of recharge per year, septic contaminants would be diluted by 17 times. Yet, studies by Dr. Zane Spiegel¹ indicate that 16 inches and possibly less are recharged to the groundwater. Using this estimate, dilution is reduced to only 9-fold. This dilution assumption also implies complete mixing of septic effluent with the recharging water, yet this is decidedly not the case. Septic effluent is found to remain at the surface of the groundwater table and to flow in plumes of concentration from the source in the direction of groundwater flow (in this case, towards the Pond). Concentrations might therefore even exceed the estimated 9-fold dilution.

For these reasons, it is vital to monitor the impact of proposed development within the District on the groundwater. It is recommended that 15 monitoring wells be situated along the pond shoreline, so located as to intercept the probable flow paths of septic contaminated groundwater from areas which are developed toward the Pond. This mechanism will provide a means to monitor the impact of proposed development within the District, and will function as a form of "Early Warning System". For this reason, stringent water quality standards must be established to allow adequate warning if problems arise. However, the standards must be based to a certain extent on the existing water quality in the wells on installation.

7(con't) State Sanitary Code Regarding Setbacks from Absorbtion Fields to Watercourses. (unpublished MS).

¹ Spiegel, Zane., in Strahler, "The Environmental Impact of Ground Water Uses on Cape Cod: Impact Study III.", p. F-4 and F-5.

Section 5.00 Guidelines

The Commission adopts the following guidelines ("the Guidelines") for the development of the Pond District. In adopting the Guidelines, the Commission has evaluated each of the considerations enumerated by Section 9 of the Act and, in addition, has considered other relevant matters.

In adopting these Guidelines the Commission has been persuaded that currently proposed development is not adequately controlled by existing public or private regulations. Grave health and welfare threats to the Island and its people are possible if development proceeds as proposed. Such development will also have profound and detrimental effect on the quality and character of life on Martha's Vineyard. So serious are these implications that regulations adopted under these Guidelines are essential so that physical impact of development can be measured, evaluated, and accordingly adjusted so that irrevocable damage to the Island and interdependent ecosystems does not result.

Towns shall, in the manner required by the Act, adopt Regulations which as a minimum comply with these Guidelines for the development of the Pond District using such authorities it deems best suited for the purpose. The Commission draws the towns' attention to Section 11 of the Act which in part provides, "In adopting such regulations, each municipality shall have all of the powers it otherwise had under the General Laws."

5.10 Goals

To prevent overburdening of public facilities, maintain water quality, assure adequate water supply, prevent pollution, promote and protect wildlife habitats, to avoid undue traffic impacts, assure the maintenance of cultural, aesthetic, and historic values, preserve and enhance the character of views, promote economic development of fisheries and related industries, to maintain and enhance the overall economy of the Island and to protect and enhance the health, safety, and general welfare of Island residents and visitors.

Section 5.20 ESTABLISHMENT OF GUIDELINES

- 5.21 As used herein the words "development", "permit", "regulations" shall have the same meaning as in the Act.
- 5.22 The town shall adopt regulations as appropriate which conform to these Guidelines to control development within the Pond District.
- 5.23 In appropriate cases, after notice and a public hearing, the Martha's Vineyard Commission may permit a town to adopt regulations which are less restrictive than these Guidelines if the Commission finds that such regulations will carry out the purposes of the Act and intent of these Guidelines for the District.
- 5.24 These Guidelines may be amended by the Commission after notice to the towns and notice and a public hearing in the manner required by the Act.
- 5.25 Unless otherwise stated in these Guidelines the regulations adopted pursuant to these Guidelines in no way alter the process for referral and review of Developments of Regional Impact according to the Act and the Criteria and Standards of the Commission.

Section 5.30 Density

There shall be a limit upon the total density of new residential development within the District. The total number of new residential dwelling units which may be constructed within the District and for which Development Permits may be issued (whether sanitary disposal facility installation, water supply connection, or building permits, or otherwise) shall not exceed the number or density of such units for the construction of which Development Permits may be issued under the Town Regulations in effect on the date of this Decision.

Section 5.40 Growth Rate

5.41

There shall be established a growth rate control for new building permits and associated sanitary disposal facility installation and water supply connection permits. This growth rate should assure that demand for public services will not occur at a rate faster than the Town can respond. This should allow the Town to plan a reasonable growth rate for its water system, school system, transportation system, proposed nightsoil treatment plant, fire and police protection, and Town solid waste

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disposal facility. Also, it will allow monitoring the accumulating impact of development on the ground and pond water, marine fisheries, and other matters of public concern. The annual rate to be established shall be one-twentieth (1/20) of the maximum number of building permits which may be issued under the Density Guidelines of this Decision. Unexercised annual permit quotas so established may be accumulated.

5.42

This growth rate shall be reviewed every three years by the Martha's Vineyard Commission. Based on data gathered by the water quality monitoring program, other studies, and the status of local planning efforts, the Commission may periodically adjust the growth rate established under this Guideline.

Section 5.50 Water Quality Monitoring

There shall be established in the District a Ground Water Quality Monitoring Program which conforms to the following:

- 5.51 Monitoring Stations and Wells shall be installed near the shore of Sengekontacket Pond at locations reasonably adopted to provide adequate monitoring of the ground water impact of the surface development in the District and use of on-site sanitary disposal systems.

- 5.52 A pond water monitoring program shall also be established. The purpose of the monitoring program is to secure reliable data upon which reasonable judgements as to probable future impact of development in the District may be made. Accordingly regulations on such future development may be adjusted to minimize or prevent pollution of ground and/or pond water.

- 5.53 The wells and stations to be so established shall conform to the following standards:
 - 5.531 There shall be wells installed within the District at locations between areas to be developed and Sengekontacket Pond, at locations and in such numbers as may be deemed necessary for the purpose and set out in the Regulations.

 - 5.532 Wells shall be 2-4 inch diameter, P.V.C. Casing driven to a depth of watertable plus 2½ feet at low tide. The well shall be fitted with number 8 slot stainless steel or P.V.C. screen.

- 5.54 This monitoring system, as recommended herein, will assure adequate monitoring of groundwater and pondwater quality. The standards adopted for the various water quality factors are a fraction of the recommended Public Health Standards adopted for the Commonwealth of Massachusetts. Establishing the state standards would not be advised, because, once exceeded the water has already been adversely affected. By establishing a fractional percentage (10% of state standards, for some of the factors), the town will be able to take remedial action, either by inspection or by limiting further sanitary disposal facility installation, before the situation progresses to a serious level.
- 5.55 The cost of the monitoring program which shall include collection and analysis shall be paid for by persons developing land and waters in the District or organizations such as Homeowners' Associations or in whole or part by the town.

Section 5.60 Exclusion Provision

The lands within the District so called the "Sengekontacket Properties" and "Waterview Farms I & II" Developments shall be subject only to the monitoring Guidelines herein and Regulations adopted thereunder.

Section 5.70 Voluntary Exclusion Provision

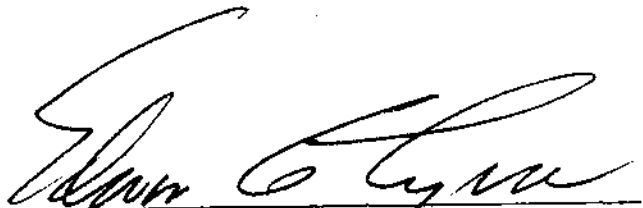
Any person within the District who voluntarily establishes a water quality monitoring program, growth rate control which meets the standards contained herein may, upon approval by the Martha's Vineyard Commission, be granted an exemption from regulations adopted pursuant to these guidelines and from the moratorium imposed on the District as a result of the designation of this area as a Critical District which is, as yet, unregulated by the Town, provided:

- 5.71 That such person covenant with the Town of Oak Bluffs for the continued maintenance, establishment, and operation of a growth rate and water quality monitoring program; and
- 5.72 That such a program or programs be submitted to the Martha's Vineyard Commission along with relevant contractual provisions between the person or persons undertaking such a voluntary growth rate and water quality monitoring program and the town before exemption from regulation or moratorium is granted by the Commission; and

- 5.73 That any growth rate program so adopted not exceed a growth rate of one-twentieth (1/20) the number of building permits which may be issued by the Town under applicable Town by-law per year for the property or properties within the District.

VOTED BY THE MARTHA'S VINEYARD
COMMISSION

March 4, 1976

A handwritten signature in cursive script, appearing to read 'Edwin G. Tyra', written over a horizontal line.

Edwin G. Tyra, Chairman

APPENDIX "A"

Island Properties Etc. (File No. 0-128-103)

- Nominated by Pare Lorentz et al - December 8, 1975
- Accepted for consideration and amended by the Commission - January 8, 1976
- Consolidated and designated as a District of Critical Planning Concern by the Commission - March 4, 1976
(Vote, 11 yes, 2 no, 2 abstaining)

Major's Cove Wildlife/Open Space (File No. OE-457-104)

- Nominated by the Martha's Vineyard Commission - January 8, 1976
- Accepted for consideration by the Martha's Vineyard Commission - January 8, 1976
- Consolidated and designated as a District of Critical Planning Concern by the Commission - March 4, 1976
(Vote, 11 yes, 2 no, 2 abstaining)

LIST OF TESTIMONY RECEIVED AT PUBLIC HEARING HELD
ON FEBRUARY 26, 1976 (verbal)

PROPONENTS

Martin S. Jaffe, Regulatory Planner, Martha's Vineyard Commission

Jeremiah F. Healy, III, of Withington, Cross, Park & Groden, Boston, representing Pare Lorentz.

Linda Marinelli, Oak Bluffs resident and abutter.

Allen Pease, of Wm. H. Hart Realty Company.

William M. Wilcox, Water Quality Manager, Martha's Vineyard Commission staff.

Dave Ferraguzzi, Oak Bluffs Planning Board member.

Sanford Evans, Edgartown resident.

Robert Woodruff, Vineyard Conservation Society.

OPPONENTS

Alvin Strock, owner of Waterview Farms.

Robert Lacourse, of GHR Engineering Corp., New Bedford

, E. Peter Mullane, Legal Counsel for Island Properties

Richard R. DeBenedictis, GHR Engineering Corp., New Bedford.

Richard Thorman, of Island Properties

Howard Leonard, Sengekontacket, Oak Bluffs.

Peter Rosbeck, Sengekontacket lot owner

Dean Swift, Harrison Street Corp. Sengekontacket

Augustus Ben David III, Felix Neck Wildlife Sanctuary

Written testimony submitted before March 1, 1976:

"Recommended Modification of Massachusetts State Sanitary Code Regarding Setbacks from Absorption Fields to Watercourses", Ward S. Motts, Amherst, Massachusetts.

"Additional Information Concerning the Possible Designation of the Major's Cove Wildlife/Open Space and Island Properties, Etc. as districts of Critical Planning Concern", GHR Engineering Corp.

"Waterview V Subdivision Covenant and Agreement", E. Peter Mullane, Esq., Vineyard Haven, Mass.

"Waterview - Martha's Vineyard", GHR Engineering Corporation.

Map - Plan of Land in Oak Bluffs, Harrison Street Corporation.

Letter to Oak Bluffs Planning Board (1/14/74) from Philip B. Herr.

"Title 25, Rules & Regulations, Part I. Department of Environmental Resources, Subpart C, Protection of Natural Resources, Art. 1, Land Resources, Chapter 73 - Standards for Sewage Disposal Facilities (Pa.)"

Letter to Martha's Vineyard Commission (3/1/76) Re: Waterview III, IV and V from E. Peter Mullane, Esq., Vineyard Haven, Mass. included with Memorandum of Law.

Sketch of land in Oak Bluffs for Wm. H. Hart Realty Co.

Plan of land in Oak Bluffs, Wm. H. Hart Realty Co.

Letter to M.V.C. (3/1/76) re: public hearing on Island Properties, Etc. District and Major's Cove Wildlife/Open Space District, from GHR Engineering, New Bedford, Mass.

Letter to M.V.C. re: Island Properties, Inc., from Withington, Cross, Park & Groden, Boston, Massachusetts. (2/28/76)

Letter to Lawrence & Johnson, Inc., Barnstable, Mass., dated 5/20/74, from Woods Hole Oceanographic Institute, Woods Hole, Mass.

Letter to M.V.C. (3/1/76) re: Waterview III, IV, V (Oak Bluffs) and VI (Edgartown), from E. Peter Mullane, Esq., Vineyard Haven, Mass.

Letter to E. Peter Mullane, Esq., re: Strock Interprises and Island Properties, Inc., Request for Determination of the Applicability of Chapter 131, Section 40 (10/28/74), from the Town of Oak Bluffs Conservation Commission.

Memorandum in Support of Pare Lorentz, et al., in the Matter of Island Properties, Inc., et al., Martha's Vineyard Commission File No. 0-128-103

Illustrative Site Plan of Waterview, Island Properties, Inc.

Estimated Tax Benefits to town of Oak Bluffs Waterview Farms over a 10-Year Period by Years 1-10.

"Waterview III Subdivision Covenant and Agreement", E. Peter Mullane, Esq., Vineyard Haven, Mass.

"Waterview IV Subdivision Covenant and Agreement", E. Peter Mullane, Esq., Vineyard Haven, Mass.

"Waterview V Subdivision Covenant and Agreement", E. Peter Mullane, Vineyard Haven, Mass.

Letter to Strock Enterprises (8/7/76) Re: Waterview III, IV and V, from GHR Engineering Corporation, New Bedford, Mass.

Letter to M.V.C. re: Waterview III, IV and V (2/27/76) from E. Peter Mullane, Esq., Vineyard Haven, Mass. with "Waterview V Covenant Pursuant to Section 81- U, Chapter 41, G.L.", Dukes County Deeds Book 320, Pg. 05.

"Waterview Farms Architectural Review Board Waterview Farms Community Association, Inc., Rules, Regulations and Policy Statements", dated 2/25/76.

Master Declaration of Covenants, Conditions and Restrictions for the Planned Development of Sengekontacket on Martha's Vineyard, Dukes County, Mass., dated 11/1/71.

Letter from Peter Rosbeck, Newton, Mass., (3/1/76) to M.V.C.

Letters from Howard Leonard, Sengekontacket, Oak Bluffs, Mass.

Letter from Alan J. Schweikert (3/1/76), Oak Bluffs, Mass.

Letter to M.V.C. (2/27/76) from Worth & Norton, Edgartown, Mass.

"Waterview Farms Protective Provisions", Declaration of Covenants, Conditions, Restrictions and Easements by and between Island Properties, Inc., and Waterview Farms Community Association, Inc., dated 2/25/76.

Letter to Mrs. Herbert Hancock (1/28/76) from Richard J. Thorman, Waterview, Vineyard Haven, Mass.

Written testimony, continued.....Page 3.....

Letter from Island Properties, Inc., (10/25/73) to Oak Bluffs Planning Board, Oak Bluffs, Mass.

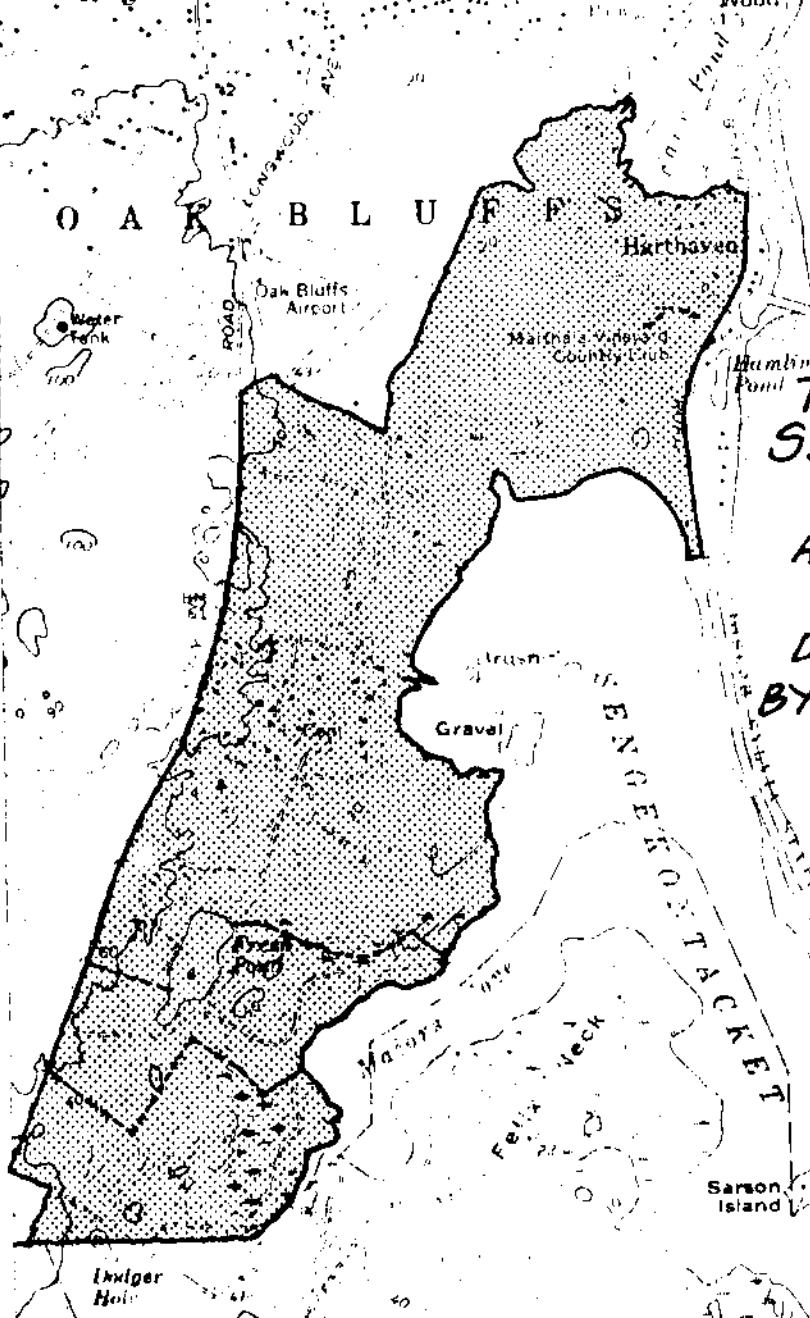
Letter to Oak Bluffs Planning Board (1/14/74) re: Waterview Review Procedure, from Philip B. Herr.

Letter to Oak Bluffs Planning Board (11/26/73) re: Waterview III, IV, and V, from Philip B. Herr.

Report from Oak Bluffs Planning Board (5/14/74).

Property Report dated 6/27/74, Office of Interstate Land Sales Registration, U.S.Dept. of Housing and Urban Development.

Staff Testimony, with water quality and supply analyses- Appendix A and B (2/26/76).



**THE OAK BLUFFS
SENGEKONTACKET
DISTRICT**
A DISTRICT OF CRITICAL
PLANNING CONCERN
DESIGNATED MAR. 4, 1976
BY THE MARTHA'S VINEYARD
COMMISSION



SENGEKONTACKET
SEEDING PROGRAM
(IN OAK BLUFFS AREA ONLY)
1971 TO 1975 SEEDED AREA
IN BLACK

20 BUSHEL LITTLE NECKS
114 BUSHEL SEED