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Its Present Status and Remedial Measures Needed to  
Increase Statewide Production.

By

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Introduction

In 1978 the Virginia Institute of Marine Science published an in-depth analysis of the Virginia oyster industry. This 1024 page volume entitled, "The Virginia Oyster Industry: Its Status, Problems and Promise," by D. S. Haven, W. J. Hargis, Jr. and P. C. Kendall, analyzed its past history, its present state, and made recommendations for the future.

The following short report summarizes briefly some of the most significant findings of this report.

The Major Problem

Virginia, once the leading oyster producer in the United States has suffered since 1960 a major decline in production. In the decade prior to 1960, annual state-

wide production averaged about 3.2 million Virginia bushels. Of this total, about 0.55 million came from the state's 243,000 acres of public bottom (Figure 1). In contrast, the remainder (2.65 million bushels) came from about 120,000 acres of leased bottoms. That is, the leased bottoms, on less acres, were producing nearly 5 times the oysters as public bottoms. This level of production occurred despite the fact that the public bottoms contain most of the natural seed rocks, and a substantial acreage of the best growing areas.

Today, in 1982, Virginia harvest is far below the pre-1960 level. The decline in production in Virginia is largely due to a decline in production from leased areas (Figure 2). Landing data for the 1979-80 season show 0.61 million bushels landed from the state's public bottoms. Production from leased bottoms was only 0.43 million!

The cause or causes of the major decline in landings from the state's leased bottoms are complex and interrelated. The oyster pathogen MSX entered the Bay in early 1960 and made oyster culture economically unprofitable in high salinity areas. The disease still exists in the Bay in the same areas as it occupied in the 1960's.

Accompanying the onset of MSX, there has been a decline in the level of spatfall in several estuaries. This began in about 1960 and has been most severe in the James

River seed area. One hypothesis for this decline is the absence of spawners in the lower James. Another possibility is that it is associated with adverse environmental conditions.

Added to these adverse conditions there has been unfavorable socio-economic conditions which have added to production costs and which has discouraged private growers from culturing oysters in areas where MSX is not a problem. Restrictive legislation and regulations which enforced outdated production techniques or practices have also contributed their share in inhibiting production.

While present production from leased bottoms is very low, information outlined in the study indicates that production can and should be greatly increased on public bottoms and on leased areas. Some of the more important remedial actions or needed changes in management practices outlined in the study by VIMS follow.

- A. Rewrite certain existing ambiguous regulations so they clearly permit the use of mechanized cost-efficient gear to harvest shellfish on leased bottoms when it can be shown that the use of this gear is compatible with sound management practices. For example:

1. Paragraph 28.1-134 in the Code states,  
"It shall be lawful... to dredge or scrape  
(leased bottoms) at any time except Sunday

or at night..." The wording of this regulation should be modified to permit (in addition) any mechanical harvester such as that developed by VIMS or similar gear in existence elsewhere.

- B. The Commission under 28.1-85.1 (Laws of Virginia) may harvest and transplant seed oysters at any time of the year from any area of the state where the Commission has planted seed or cultch thereon. To date the Commission has carried out such operations in many areas but only to a very limited degree in the James River.

Needed is a new approach to seed growing in which the Commission utilizes to a much greater degree the still enormous potential of the lower James River as a seed producing area by using cost-efficient dredges or mechanized harvesters. The James has much bottom suited for this type of mechanized operation; far more than other areas of the state.

Tonging (which is costly) should not be the method of harvest. This aspect (in 28.1-85.1) needs clarifying for the James River.

Large 10-40 acre plots in the James River of suitable bottoms where oyster density is now low should be set aside. These should be shelled

and when a set develops the seed should be dredged or harvested by a mechanical harvester. The resulting seed should be transported by large barges to public beds in other estuaries. Reshelling should follow harvest at the proper season. Dredging, transport and planting should be allocated by the Commission by competitive bidding.

1. In the event the state has a surplus of seed on a planted area in the James it should be made available at cost to private interests.
2. The Commission should continue to plant shells and seed in biologically suitable areas which give the best returns.

- C. Consider the leasing of certain Baylor bottoms having a low level of natural productivity to private interests. (A study of these bottoms has recently been completed by VIMS and it could be utilized as a data source.) Here legislation is needed.
- D. Both the public and private sector should be encouraged through research sponsored by state or federal agencies or by individuals, to develop

modern cost-effective ways of planting, growing and processing oysters. Examples:

1. Develop practical cost-efficient mechanical oyster shucker;
2. Encourage the use of mechanized planting barges;
3. Make greater use of mechanical oyster harvesters (see A);
4. Utilize mechanical sorting or culling for seed and market oysters (see A).

E. Increase the demand for oysters at the retail level.

F. Develop methods to reduce costs of processing and growing oysters.

G. Develop techniques for growing commercial quantities of MSX-resistant seed oysters in large volumes. This seed is faster growing and more uniform in shape than wild stocks.

H. There is a need to enforce equally on a nationwide scale standards of meat (bacterial levels and water content) and growing area water quality standards.

I. Shell cultch is a major need for the public and private sectors, and there is a strong possibility it will be a short supply in a few years. The

possibility of developing Virginia's supply of buried shell for the sole use of industry needs to be studied.

J. Management at the state level should have the necessary flexibility and authority to respond rapidly to changing conditions encountered by the public and private sectors.

K. Study why spatfall has declined since 1960 in the James River and if possible take remedial action.

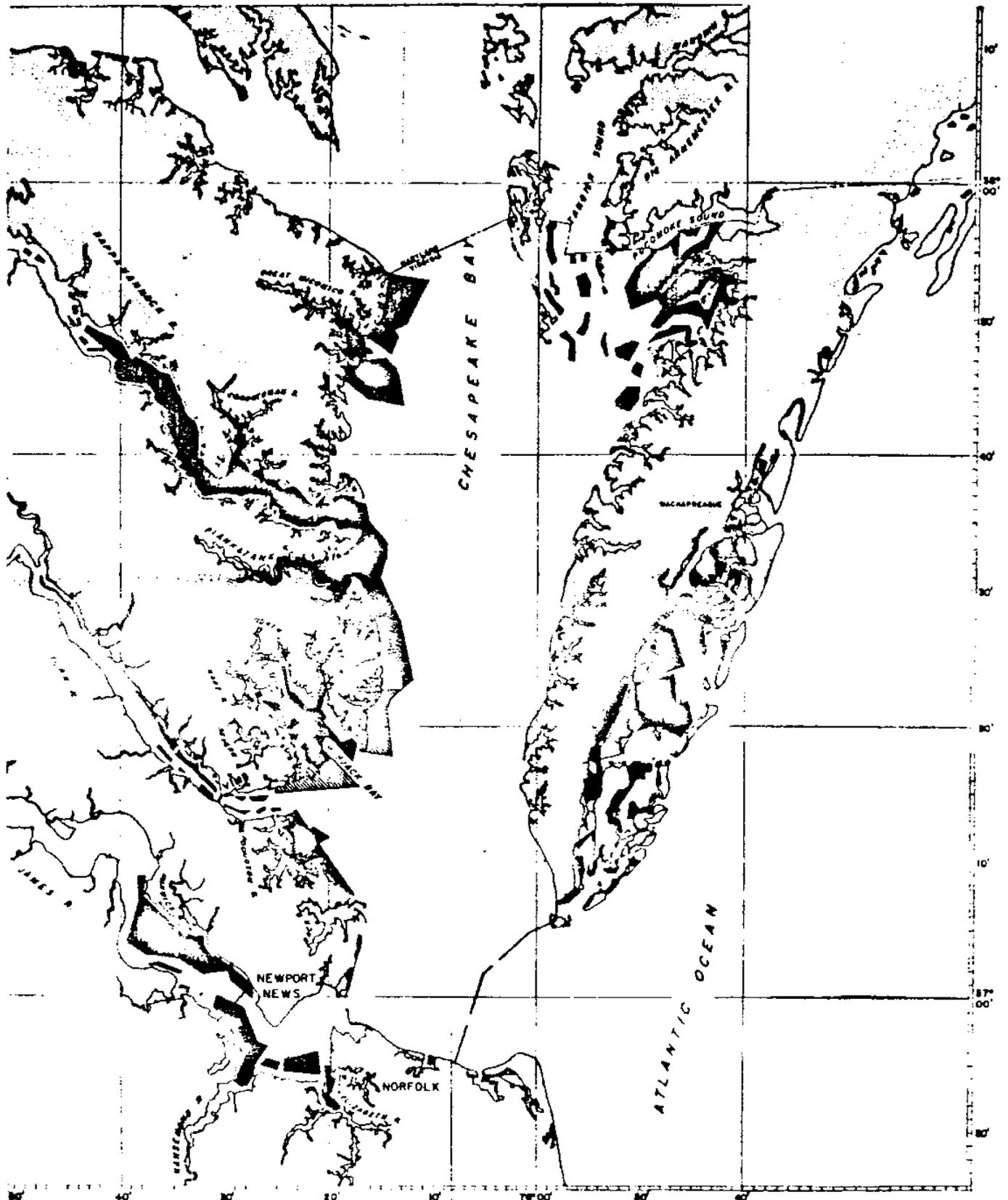


Figure 1. Map of Tidewater Virginia showing public oyster ground and public clam ground. From maps on file at the VMRC. The Baylor Bottoms are in black. public clam bottoms are shaded

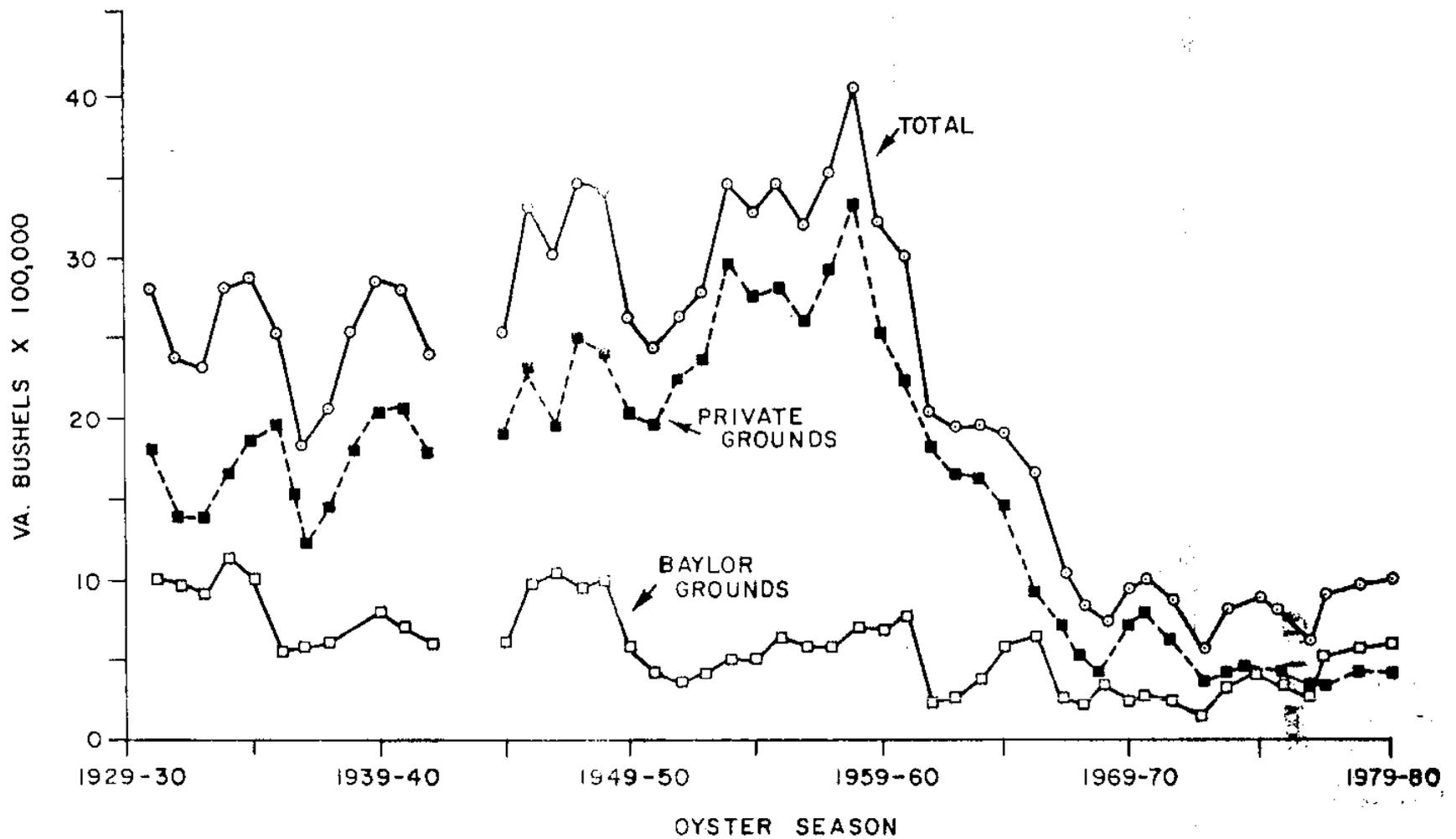


Figure 2. Market oyster production in Virginia public and private grounds.