

Reports

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## PRFC Restrictions on Striped Bass Fishing

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**PRFC Restrictions on Striped Bass Fishing**

Comments by

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**Marine Resource Report #83-11**

Comments by Herbert M. Austin, VIMS on the  
PRFC restrictions on striped bass fishing

(Note: These Comments were prepared, but never delivered  
to the PRFC at the 9 August 1983 Public Hearing)

There has been considerable concern generated over the decline of the Chesapeake Bay striped bass. The Potomac River has traditionally been a major source of the stock. Three factors cause a stock to fluctuate. Natural environmental variability has been shown to influence the success of recruitment. These include cold winters, magnitude of spring runoff, availability of forage to first feeding larvae, and predation. We have no control over these factors. Pollutants have been cited in many instances, but documented in few. Pollution is often cryptic and the results not apparent for decades. There are several regulatory agencies that can control pollution, none however, have jurisdiction over fisheries management. Mitigation of documented pollution effects takes years to a decade to effect. The PRFC has no regulatory authority to control water quality. Fishing pressure, by both recreational and commercial fishermen, has a direct, and generally demonstrable effect on stock size. The PRFC is mandated to control fishing pressure on the stocks. Mitigation should take 1-3 years, if environmental conditions are favorable, or at least average.

My feeling from a review of the literature, discussions with scientists and fishermen, and my own research is that natural environmental variables are responsible for the dominate and failure year classes. Generally, the striped bass is density-independent, year class strength is not directly dependent upon spawning stock size; but when stocks are depressed, as the striped bass is now, recruitment becomes more variable and the chance for a recruitment failure increases. Pollution has been documented to reduce the viability of eggs, reduce their yolk food supply, and reduce the vitality of larvae. In spite of this, there is a resurgence in the James (Fig. 1) and Hudson Rivers, the two most polluted striped bass spawning rivers on the east coast. Also, the two rivers where fishing pressure has been restricted.

The Interstate Fisheries Management Plan for Striped Bass recommended protection of the spawning grounds, and a 14" minimum. During normal stock years this may not be necessary, but is at current levels. A reduction of fishing pressure on the River as the fish run upstream to spawn, and on the spawning aggregated fish will only help to restore the stock.

Figure 2 shows the distribution of striped bass catch on the River since 1980. Normally the winter-spring fishery dominates as the older fish are in the River and ascending to spawn. The smaller fishery, the fall fishery, is composed of smaller juvenile fish. The disparity is due to the fact that during the fall the larger fish are in the coastal migratory fishery in New York and New Jersey. This dominance has been reversed since 1981. I attribute

this to a paucity of adult spawning age fish.

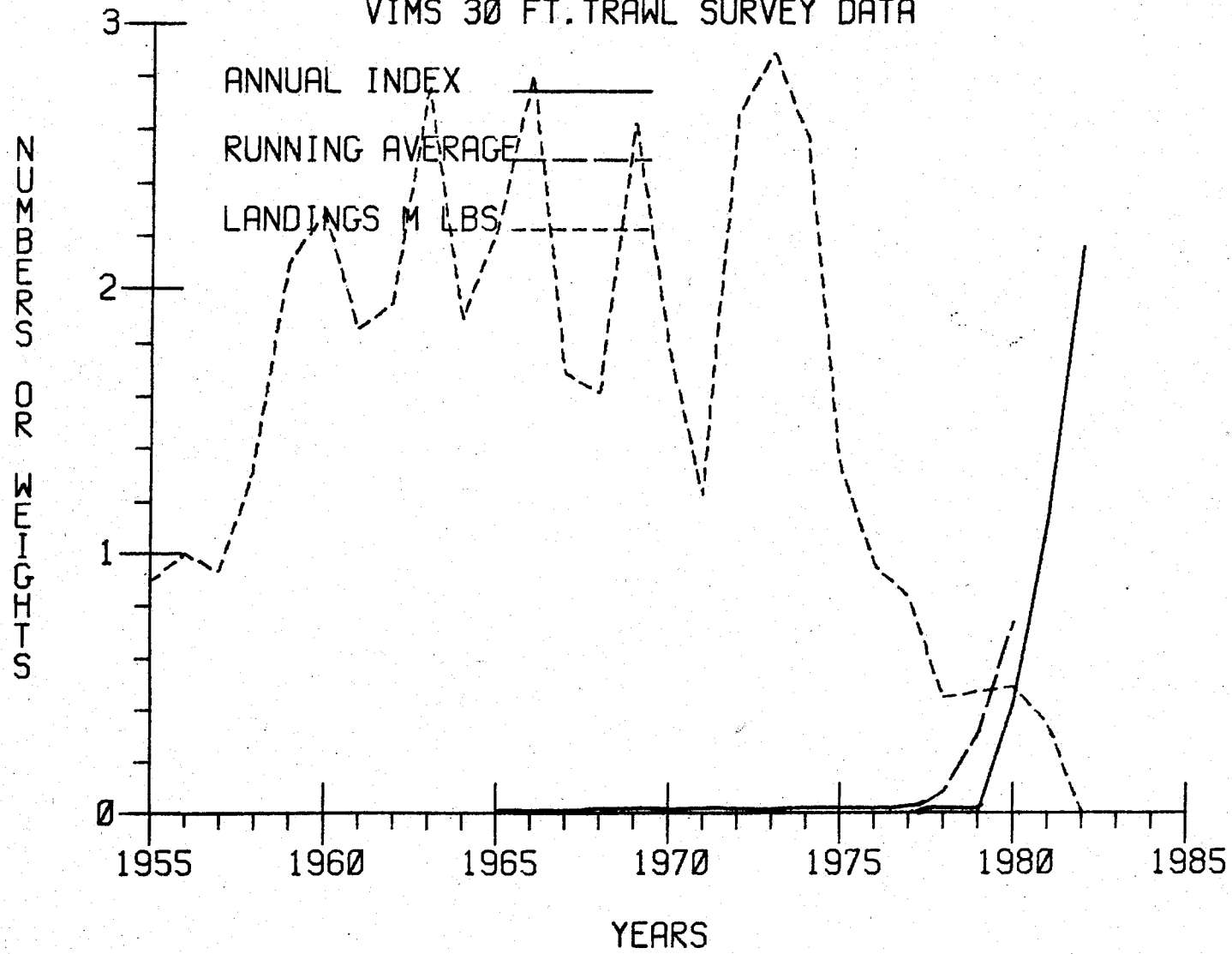
The following figures should be of interest. Landings for 1982 were close to 140,000 pounds. Some 200 watermen fished gill nets. That is roughly 700 pounds per man, and with the average juvenile weighing in at 2 pounds, only 350 fish per year. Or, at \$3.00/lb, some \$2000-\$2500 per man. Maryland data (Krantz, personal communication) suggests that only 5% of the Maryland watermen catch 90% of the fish, 10 men then make \$40,000 each and the rest only about \$200 catching rock. A regulation restricting the catch will not then, put many traditional watermen out of business as has been suggested. On the other hand however, are the part-time fishermen (school teachers, firemen, construction workers) that rely on the \$200-1000 they earn fishing during periods when their "regular" job does no pay.

It was our (the Advisory Committee) recommendation that the River be closed from January through May to protect the spawning run and spawning females; that the number of feet of gill net permissible on each stand be reduced from 1200 to 600 to reduce pressure on the juveniles; and that 3-3/4" be established as a minimum mesh size to protect fish under 14". The closure periods as actually passed, 1 January to 15 February and 1 April to 31 May will help, particularly during the spawning season; and the increased mesh size (3 3/4" all year) will help protect sub-14" juveniles. This was no the time however, for a compromise. The "average" 1982 year class has been cited as justification to reduce the restrictions. These fish will enter the fishery in 1984, and without stringent protection few will reach spawning size in 1986-1988.

The scientific community must provide careful monitoring, in cooperation with the watermen and processors, to observe the 1983 recruitment and growth of 1982 and 1983 yearclasses; and their subsequent survival to yearlings and beyond.

# JAME RIVER CATCH/UNIT EFFORT FOR STRIPED BASS

## VIMS 30 FT. TRAWL SURVEY DATA



POTOMAC RIVER  
STRIPED BASS  
LANDINGS

