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# Position of the Virginia Institute of Marine Science on the Use of Hydraulic Dredging for the Taking of Hard Clams

Herbert M. Austin
*Virginia Institute of Marine Science*

# POSITION OF THE VIRGINIA INSTITUTE OF MARINE SCIENCE ON THE USE OF HYDRAULIC DREDGING FOR THE TAKING OF HARD CLAMS

By

Herbert M. Austin

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# POSITION OF THE VIRGINIA INSTITUTE OF MARINE SCIENCE ON THE USE OF HYDRAULIC DREDGING FOR THE TAKING OF HARD CLAMS

It is VIMS policy to support the development and operation of efficient harvest methods which lower the cost of seafood to the Virginia public. Where such mechanisms, by their efficiency threaten either the viability of the stock, or the market, we support conservation measures such as closed seasons or areas, quotas, and even limited entry.

VIMS has reviewed the studies on hydraulic dredging conducted by the states of Maryland, Florida, and those of our own staff and we find that it is less disruptive of the bottom ecology than the currently used standard oyster dredge, (Appendix I) or patent tong.

The often cited example of the hydraulic dredge overfishing Chincoteague in Maryland was the result of no regulations whatsoever, and poor resultant outside recruitment due to the slow circulation/replacement of the Bay's waters.

In 1978 we prepared a statement of "Alternate Management Schemes" (Appendix II), for the VMRC to consider in rewriting Regulation X, (Pertaining to the Catching and taking of Clams). Our recommendations for the Seaside of the Eastern Shore are contained therein, and with modifications related to the length of the escalator could be applicable state wide. Further, sensitive areas, such as parts of the Seaside of the Eastern Shore could be closed to the use of the dredge.

We feel that the proper way to provide a consistent management regime of our living marine resources is to support the development of regulations by state regulatory agencies, not the promulgation of new laws to cover each contingency.

| STANDARD OYSTER DREDGE | | HYDRAULIC DREDGE | |
|---|---|---|---|
| + | - | + | - |
| | High mortality to juveniles, and adults | Low mortality to young clams and adults | |
| | Destroys eelgrass beds | | Destroys eelgrass beds |
| | Destroys bottom and benthos (150'/min X 24") | Easier on bottom and benthos (8-12'/min X 24") | Leaves a trench which gradually fills |
| | Modifies or removes 5 to 6" of bottom - shell or small organisms may be swept from the area | Shell or small organisms are returned to same area as where harvested | |
| | Less energy efficient | More energy efficient | |
| | Worse CPUE | CPUE better | |
| Inexpensive | | | Expensive |
| Less down time | | | More down time |
| Few parts | | | Many moving parts |
| Small boat | | | Requires large boat |
| | Labor intensive | Less labor intensive | |

# ALTERNATIVE MANAGEMENT SCHEMES FOR THE DREDGING OF HARD CLAMS ON SEASIDE OF EASTERN SHORE

1. No dredging for clams
   a. On any Baylor Bottom
   b. In any eel grass bed
2. Phase out standard oyster dredging for clams
3. Advocate hydraulic dredging for clams
   a. Limit pump intake to 6" and discharge to 4"
   b. Limit cutting bar to 24"
   c. Limit length of escalator to 30'
   d. Limit size of grating behind cutting bar to 3/4" opening (saves "nicks" and reduces sediment plume)
   e. Limit activity to >150' for lease boundary
4. Restrict harvest by:
   a. Monday - Friday only
   b. Limit catch by Bu./man, Bu./boat, Bu./Acre, No. of boats/Acre, etc.
5. Season

   Close season after 4 July - economics

   No biological reason to limit season