

**1999 letter report to Maryland Department of Natural Resources Secretary Griffin,
concerning dredge scars in Maryland coastal bay SAV beds:**

April 14, 1999

The Honorable John R. Griffin, Secretary
Maryland Department of Natural Resources
Tawes State Office Building
Annapolis, MD 21401

Dear Secretary Griffin:

On Dec. 10, 1997, I submitted a [letter](#) to you highlighting the extent of damage to beds of Submerged Aquatic Vegetation (SAV) in Maryland's Coastal Bays that we believed was attributed to activities of commercial clam harvesting by hydraulic escalators.

Subsequent to this, the passage of Maryland Senate Bill 398 in 1998 protecting existing SAV in Chesapeake Bay and the coastal embayments from hydraulic dredging, the delineation of SAV bed boundaries by a task force, and formal approval of the boundaries after public hearings were, in our opinion, crucial steps in ensuring the survival of this critical living resource. The intent of this letter is to update you on the extent of SAV bed scarring in the Coastal Bays that was identified from our July 1998 SAV monitoring.

In last year's report, we showed that 1,255 acres of SAV were scarred in 1997 compared to only 131 acres in 1996 ([Figure 1](#)). We also noted an increase in the density of scar damage ([Figure 1](#)). The photography taken in July, 1998, revealed 1,849 acres of SAV that had scar damage, an increase of 47% over 1997 ([Figure 1](#)). Of this damage, 57% was classified as having moderate or dense scarring compared to 19% in 1997. We are not able to precisely determine how much new scarring occurred between 1997 and 1998 because many of the areas identified in 1997 were likely dredged again in 1998 (as evidenced by the increase in acreage in the higher density classes). Therefore, new scarring can only be reported as an increase in scarring intensity. However, we believe both the increase in overall acreage of scarring (594 acres) and increase in scarring intensity are notably significant.

It is clear that in some areas, scars formed in 1997 remain unvegetated in 1998 as shown in the accompanying figures ([Figures 2 and 3](#)). The prominent scar clearly shows the scar outline in the SAV bed in both years and the notable lack of revegetation in the scar despite the general increase of SAV in the surrounding area. We hypothesize that probable depth differences between the scar and adjacent undamaged area may contribute to increased scour in the scar due to hydrodynamic effects as well as increased deposition of detrital mats during quiescent periods that could smother recolonizing SAV. However, we have not

conducted the intensive ground measurements of scars which are necessary to document the revegetation of old scars. We cannot predict at this time the length of recovery period. Only through onsite monitoring of a number of scars formed in the three years indicated in Figure 1 will it be possible to determine both length of recovery and the species that colonize these areas.

We recognize that the protection zones were established this past year after our photography was taken. This year, given full protection from any dredging activity, we will have the opportunity to use 1999 photography to estimate recovery time. We again applaud the efforts of your staff in the arduous task of establishing protective boundaries and are certain that the enforcement officers will do their best to protect this extremely valuable habitat.

I have also enclosed a copy of a [report](#) we submitted to the Virginia Marine Resources Commission regarding the effectiveness of the SAV sanctuary created in Virginia's portion of Chincoteague Bay. This sanctuary, established in January, 1998, was in response to the destruction of SAV beds by Virginia clam dredging (previous reports on this subject for both the Virginia and Maryland problem can be accessed on our web page (<https://www.vims.edu/research/units/programs/sav>) under the [Special Reports section](#)). Please note that our concern in Virginia is also the recovery of SAV into these scars, which in some, may take a decade or longer.

If I or my staff can be of any assistance to you or your staff, please do not hesitate to call me.

Sincerely,

Robert J. Orth, Ph.D.
Professor,
Biological Sciences

cc: Dr. Donald Boesch, UMCES President
Dr. Gene Burreson, VIMS, Director for Research and Advisory Services
Dr. Hugh Ducklow, VIMS, Chair, Biological Sciences
Senator Brian Frosh, Maryland Senator
Dr. Bill Goldsborough, Chesapeake Bay Foundation
Ms. Verna Harrison, Assistant Secretary, MD DNR
Ms. Phyllis Koenig, Executive Director, Assateague Coastal Trust
Mr. Bill Matuszeski, Chesapeake Bay Program Office

Mr. Tom Patton, President, Assateague Coastal Trust
Mr. William Pruitt, Commissioner, Virginia Marine Resources Commission
Ms. Ann Swanson, Executive Director, Chesapeake Bay Commission
Ms. Carolyn Watson, Chair, Living Resources Subcommittee
Dr. L. Donelson Wright, Director, VIMS
Dr. Carl Zimmerman, National Park Service, Assateague Island
SAV Workgroup Members
Bi-state blue crab advisory committee chair
Chair, Chesapeake Bay Commission

Figure 1. Acres of SAV damaged by clam dredging and intensity of scarring in 1996, 1997 and 1998 in Maryland's Coastal Bays (Chincoteague, Sinepuxent and Isle of Wight bays) (Very sparse = 1-10% of the bottom scarred; Sparse = 10-40% scarred; Moderate = 40-70% scarred; Dense = 70-100% scarred).

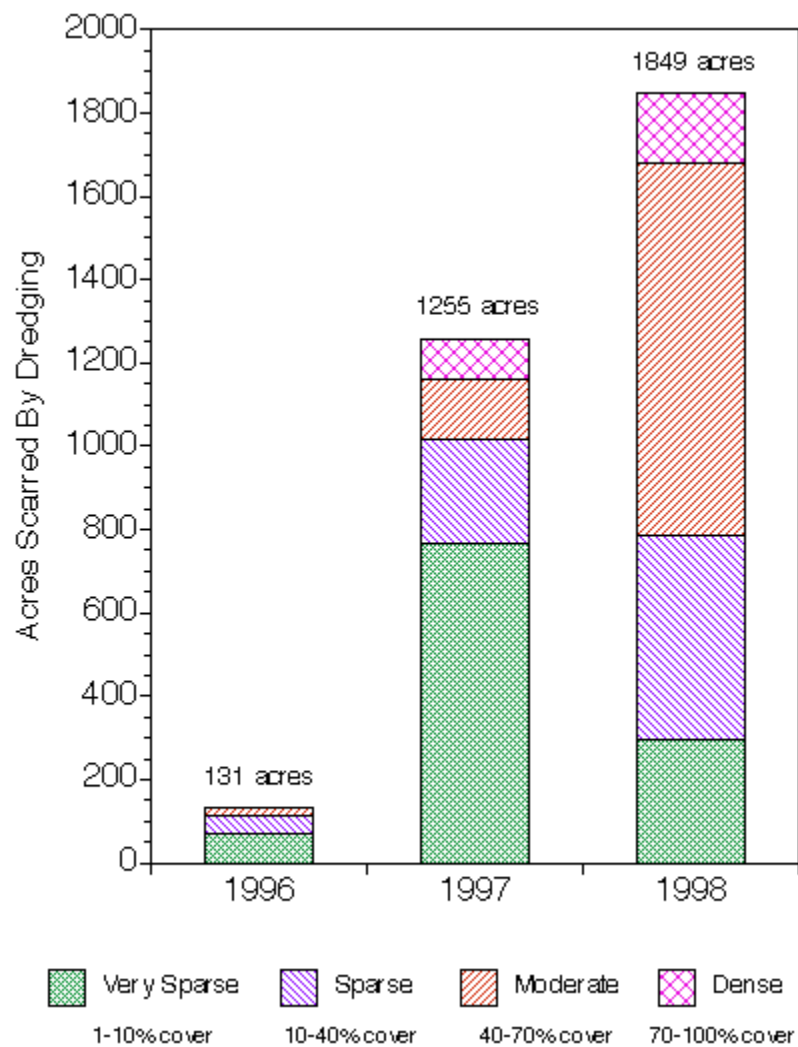


Figure 2. Outline of clam dredge scar in an SAV bed in Chincoteague Bay identified from the 1997 SAV aerial monitoring program.

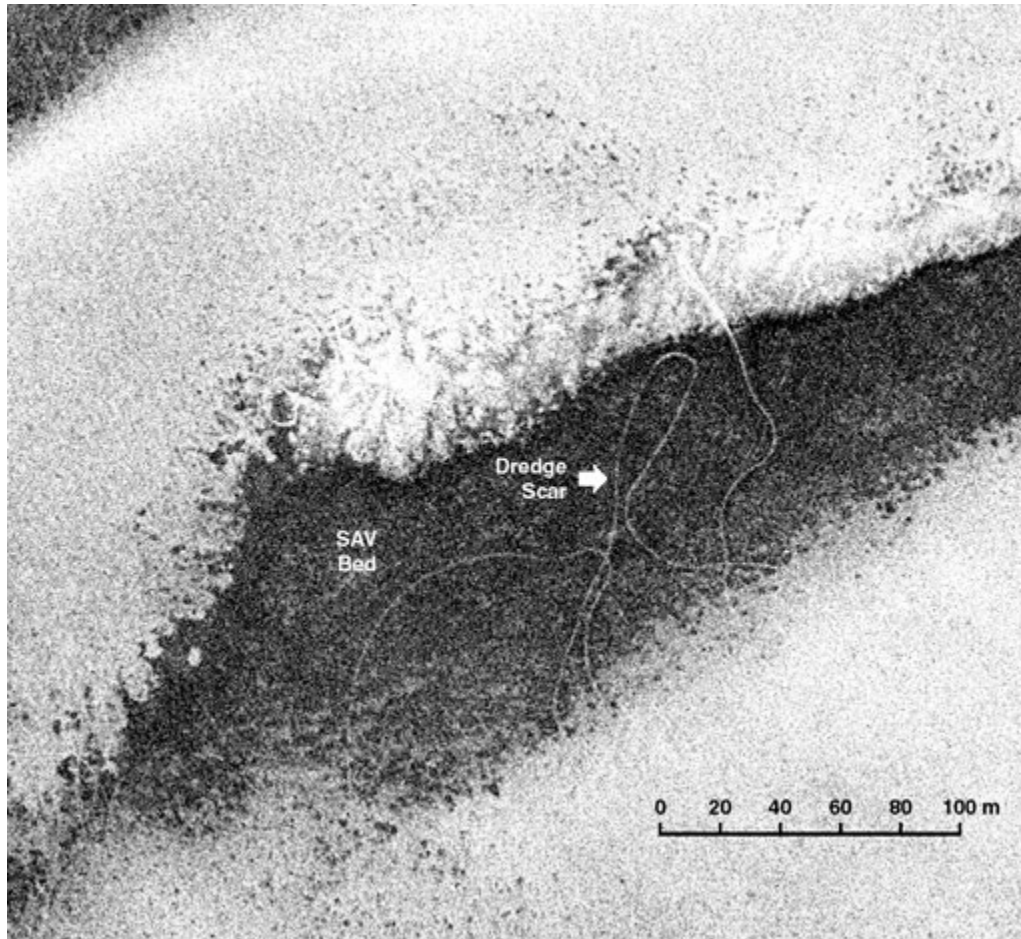


Figure 3. Outline of the same clam dredge scar identified in the 1998 SAV aerial monitoring program showing no revegetation in the SAV bed, while some of the surrounding SAV bed has expanded naturally.

