

U. S. House of Representatives Committee on Natural Resources

Subcommittee on Fisheries, Wildlife, and Oceans

**Oversight Hearings on Past, Current, and Future Efforts to Restore Oysters
in the Chesapeake Bay**

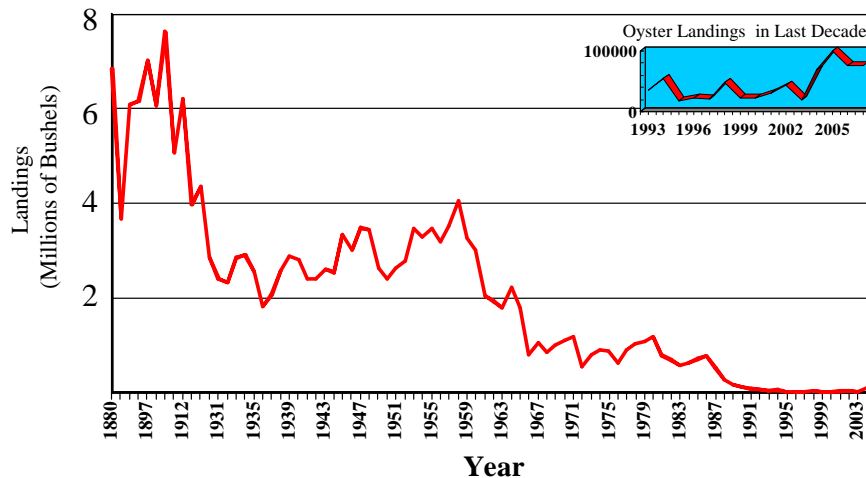
September 10, 2008

Testimony By: Tommy Kellum, W. E. Kellum, Inc.

I am Tommy Kellum of W. Ellery Kellum, Inc. W. Ellery Kellum, Inc. is an oyster processing firm located on the Rappahannock River in Lancaster County, Virginia, and has been in existence for the last sixty years. I am also an owner of Kellum Bros., LLC, which has been involved with public and private oyster replenishment efforts since 1985. I serve as vice president of the Virginia Seafood Council and am fourth generation to the oyster industry.

In order for one to fully understand where the Chesapeake oyster recovery is now in Virginia, and where it could potentially be in the future, you must first know the history of where it's been. Traditionally two-thirds of Virginia's oyster production was propagated by private oyster producers who leased State-owned bottom for this purpose. These privately owned oyster stocks provided tremendous environmental and economic resources to the Bay community. Thousands of people were employed by the individuals and companies that propagated, harvested, processed, and distributed oysters. The ecological assets provided by this shellfish culture were extremely valuable and for years this benefit was provided at no economic cost to the public. Private oyster production was very efficient from the late 1920's until the 1980's when the Bay's oyster diseases made this activity unprofitable. Several of Virginia's oyster processors and producers were forced out of business at this time and the private oyster industry basically stopped investing their own funds in such a risky enterprise.

Oyster Landings (1880 - 2007)



The public resource and public grounds were and continue to be managed by the Virginia Marine Resources Commission. The Commission conducts this management through the Oyster Conservation and Replenishment Department of the Fisheries Management Division. This department recommends fishery management as well as replenishment plans to the Commission and implements all approved activities. A tax system on harvested oysters was implemented years ago to tax the user groups for the replenishment of the resource. During the years that oyster harvest levels remained high, these tax revenues provided funding for replenishment along with only small amounts of State General funds. Once the oyster harvest collapsed due to the disease pressure, the tax system no longer provided the necessary funding for the public ground replenishment.

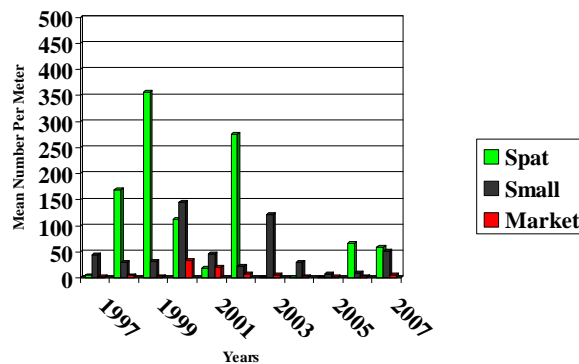
In the 1980's, Virginia's oyster harvest continued to decline, causing industry and State officials to collaborate on a recovery strategy. A panel of individual stakeholders was formed and titled the "Virginia Blue Ribbon Oyster Panel". The panel explored possible ways to initiate

oyster restoration and industry recovery. This Panel also advised the Virginia Institute of Marine Science (VIMS) to engage all possible resources to study and investigate the oyster diseases as well as to look into the option of a non-native oyster species. The use of a non-native species had worked on the West Coast of the United States and also in countries, such as France, Ireland, and Australia, to replace the ecological and economic loss of a native oyster species. U.S. Senator John Warner and Congressman Herb Bateman were also brought in to bring Federal support and funding to the renewed effort. In the early 1990's, Dr. James Wesson was brought in as head of the Marine Resources Commission, Conservation and Replenishment Department. He initiated an all out restoration strategy, which was recommended by the Blue Ribbon Oyster Panel and this was supported by the influx of significant amounts of State and Federal funding.

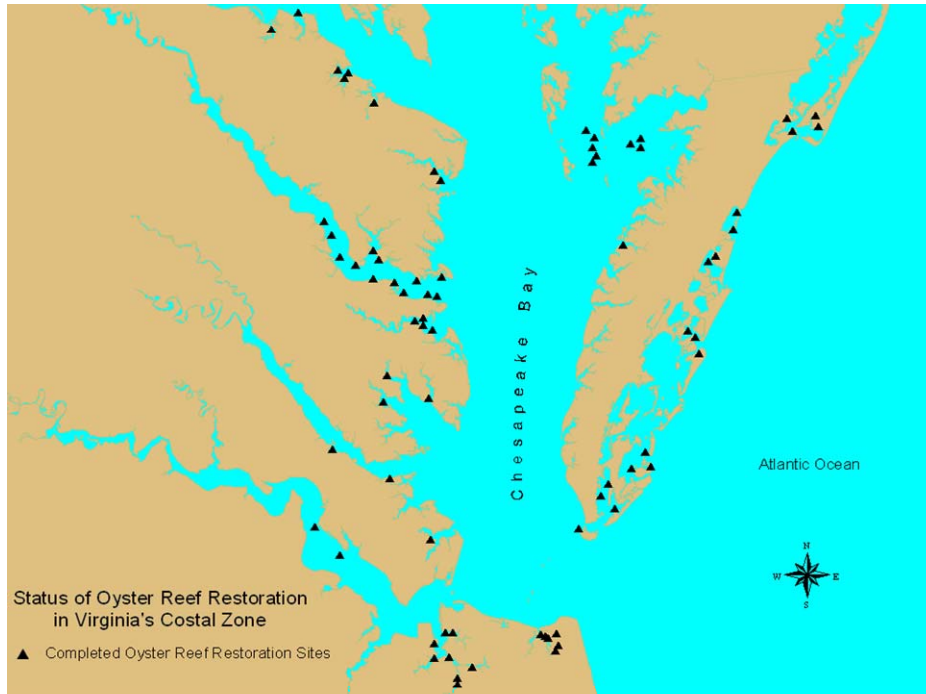
These funds were sought after and used in many projects as an effort to use the industry infrastructure to conduct these restoration projects. As our industry was disappearing from a lack of an oyster resource, these State and Federal funds to accomplish the restoration projects were critically important to our industry's survival. Millions of dollars were invested and Federal partners such as the Army Corps of Engineers (ACOE) and National Oceanic and Atmospheric Administration (NOAA) were brought in on the effort. In many areas, the public fishery was shut down as areas were closed to harvest and industry was engaged to carry out most of the restoration work as this was the most efficient and economic way to conduct this work. During this same time period much research was being conducted on oyster disease and the genetic selection of native oysters which could live longer and grow faster. Research was conducted with industry partners on the non-native oyster, Crassostrea ariakensis. Private industry continued to try different strategies for propagating oysters with mixed, but generally disappointing results.

One of the largest restoration efforts was to build reef structures to replicate historical oyster reefs. These reefs were built of oyster shell provided by the few remaining oyster shucking plants. Many of the reefs were covered with broodstock oysters and left to spawn. The oysters would spawn but the majority of the prodigy would not live long enough to establish a

Typical 3-D Sanctuary Reef, Dive Surveys 1997 - 2007

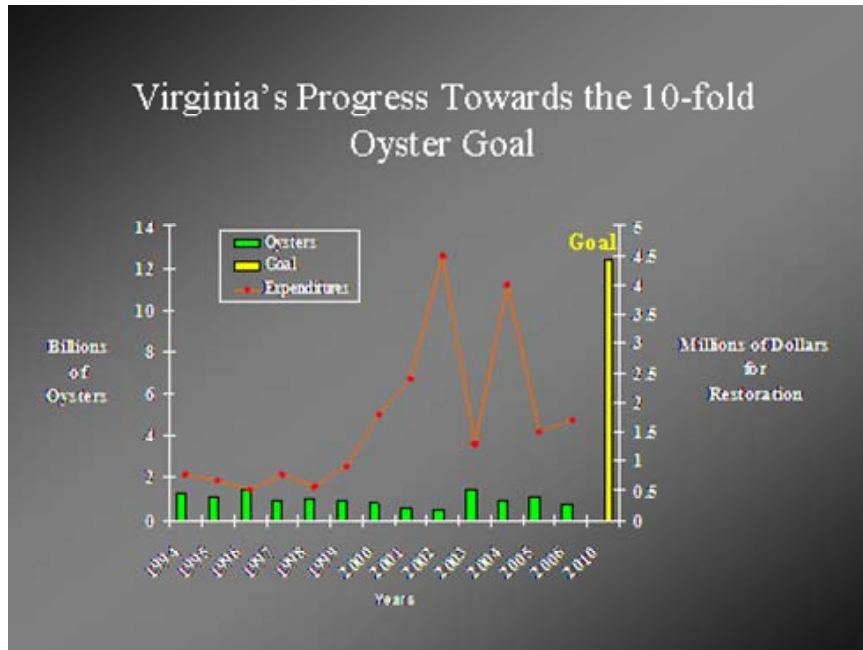


living oyster reef, therefore there was not enough biomass to keep the reef together without continual maintenance efforts of replacing deteriorating shell. Nearly one hundred of these reefs have been constructed since 1993, all have been maintained as oyster sanctuaries, and all generally show the same decline in populations over time.



In early 2000, the Virginia Oyster Heritage Program was launched. This was a collaboration of public and private efforts to devise a restoration strategy for the Rappahannock River. My company is located on this river and we were very involved in the restoration activities and in the decisions for its management. The result was to form a series of sanctuary reefs surrounded by harvest areas. The Coastal Zone Management Program, the Virginia Department of Environmental Quality, the NOAA-Chesapeake Bay office and the Norfolk District-ACOE were major partners in this effort. Senator Warner helped to get the ACOE Federal funding initiative put in place. The plan evolved as a systematic group of harvest and sanctuary areas numbered from the lower Rappahannock further up river. These areas each saw substantial restoration efforts and many remained closed to harvest until 2007. Harvest was allowed over only one half of the entire area and by 2007, it was apparent that oyster populations were very similar in both the harvested and unharvested portions of the restored river. Large, older oysters never accumulated in large numbers in the areas which had been closed to harvest.

This was everyone's goal for this project, but oyster diseases still control all oyster populations in medium to high salinity areas of the Bay. In the 2007 season the river was opened for harvest under the rotational harvest program. After careful deliberation by the Oyster Heritage Program directors, and the Marine Resources Commission, this new rotational strategy seeks to maximize the use of the larger, more marketable oysters before they die from disease by rotating harvest areas every three years. This seeks to work around the disease pressure in the area and also maintain adequate sanctuary areas to insure long-term sustainability for the Lower Rappahannock River. The season was a success and the strategy has spawned a model that will be applied to other river systems. As a private citizen and taxpayer, I agree that a lot of money has been spent on oyster restoration, and overall the success has been hard to measure. But in this case, this is an example of where dollars spent have been monitored along with the success of the project by all of the partners, and changes have been made that appear to be moving this effort in a very positive direction. We have learned from the efforts, and as long as we move forward and do not repeat the mistakes, it has been money well spent.



As an oyster restoration participant and a citizen taxpayer, it appears to me that in recent years, much of the Federal oyster restoration money is being wasted. In early 2000, ACOE and other Federal agencies began to get more aggressive in oyster restoration as millions of dollars began to flow to the effort. The ACOE, through the advisement of several “new to the subject” biologists, switched focus of oyster restoration from one of a combination of ecological and economic to one of oyster restoration for ecological reasons only. They were able to spin a Congressional interpretation to one of a non-fishery based restoration effort. The ironic twist is that this interpretation came after the ACOE had worked with the VMRC and industry to conduct a huge shell restoration program and seed oyster transfer from the Great Wicomico River to Tangier Sound on the east side of the Bay. This project, designed by VMRC, proved to be one of the few dollar for dollar economic successes of this entire restoration effort, while providing a fishery for the residents of Virginia’s Tangier Island. The Tangier Program

continues today, has a large biomass of oysters, and has begun a rotational harvest system, similar to the Rappahannock River.

Since that project in Tangier was completed, ACOE funding has been used to plant shells in the Great Wicomico and Lynnhaven Rivers. The projects have been touted with claims about broodstock supplementation with “disease resistant” oysters. There is no scientific evidence that any significant disease resistance is occurring naturally in the Bay. On the contrary, Dr. Roger Mann of VIMS and the VMRC monitoring results show that restoration of oyster sanctuary areas can never work. Dr. Mann has just completed a large research paper which he has included in your testimony and the research showed that because of disease, oyster populations can never get large enough to replace the shell that they need to support their own reefs over the long-term.

Throughout this entire time period of the restoration effort we continue to see small bursts of natural oyster propagation in tributaries of the Bay--some of these areas have been under restoration, others haven't. We have found that the oysters normally die from disease at a period between three and four years of age. Usually, we see no difference in oyster biomass after four years in areas harvested versus areas closed to harvest. There are historical harvest areas in Virginia's portion of the Bay, which have been closed for as much as twenty years that don't see any more biomass and in some cases less, than active harvested areas.

In the Great Wicomico River where the ACOE added great quantities of shell on muddy, unproductive bottom in 2005, much of the shell disappeared. These areas have been declared as sanctuaries, and in 2006 a natural spawning event populated the small percentage of shells that they had planted, which had not sunken out of sight. These populations have grown, and in 2008

they are claiming a great victory and restoration success, but the oysters are just 2 years old. Disease will not impact oyster populations significantly until after that time period.

A huge natural spawn (called spatset) is occurring this year in the James River where no restoration project has taken place. The long-term survival of the oysters on the unrestored areas of the James River, if left alone, will disappear in three or four years just like it will on the ACOE restored areas. The only difference is the tremendous expenditure of taxpayer money on unrestorable bottom in the Great Wicomico River.

I believe that in order for oyster restoration in the Chesapeake Bay to be successful, we have to move into an industry-driven, self-sustaining program, as opposed to dumping millions of dollars of public money into projects that have been done before and have been proven to not work in the presence of oyster diseases. When you take out the public relations information that Federal agencies and taxpayer funded researchers are spinning, it is arguable whether they can show any true success. I am convinced the private oyster industry efforts can provide huge returns both economic and ecological at a fraction of the cost of Federal attempts. Oyster aquaculture, through a hatchery-based initiative shows strong promise for oyster propagation in the Bay. The private oyster industry in Virginia through some preliminary, small grant funding assistance is beginning to show returns of profitable measures. Oyster aquaculture is just like other agricultural models throughout our country, where relatively small amounts of Federal assistance have jump started the private economy.

This restoration effort has to be moved in a direction of weaning from public funding and into a private, profitable venture in order to provide the measurable levels of oyster stocks necessary for ecological and economic sustainability. I know that this is not what some agencies

want to hear but as stewards of prudent taxpayer spending this is what you need to know. Dr Roger Mann of VIMS has done an outstanding job of outlining the virtual impossibility of public spending to create a measurable oyster restoration effort. In many cases, he has been shunned by other scientists and the agencies who are most interested in a continual and endless funding supply of public money.

In conclusion, the private oyster industry in Virginia has a proud heritage, producing the majority of the harvest in Virginia for many years. We have struggled with oyster diseases to the point that we have been forced to consider the introduction of a non-native oyster, and we have barely survived by importing the oyster product that we need to keep our plants running. We have been a partner in many native oyster restoration projects, and I believe that we can interpret data as well as anyone else concerning the success or failure of those efforts. We want native, Virginia oysters back on our grounds even more than we want a non-native one. We are seeing the first signs of a positive economic return from several years of trial projects. We believe with a small amount of governmental support to help build an infrastructure and to troubleshoot problems that arise, we can put more oyster biomass continually in the Chesapeake Bay using our own funds, than any government program trying to produce oysters.