

## Clean Water as Infrastructure

Keynote: *N.C. Representative Paul Tine (I), District 6*

When colonists from England first reached North Carolina and Virginia in the 1600s they spoke about oysters “that lay thick as stones,” fish more plentiful “than could be devoured by dog or man,” and water so clear that you could easily see the bottom.

Soon after their arrival, the quality of the water, the bounty it contains and the beauty it presents became the infrastructure of commerce along the coast. This remains true today.

In North Carolina our two biggest economies are agriculture and tourism and both rely heavily on clean water. The impact of clean water can be seen in the results that we have in these two areas.

The visitors to our coast spend \$2.7 billion per year to fish, play on our beaches, explore our parks and enjoy our waterways. Just in our coastal counties, tourism provides close to 30,000 jobs.

Our estuaries are known for being some of the most productive in the world, serving as nurseries and spawning grounds for crabs, shrimp and fish in great quantities. In fact our estuaries provide half the area used as nurseries by fish from Maine to Florida and ninety-two percent of the fish landed in North Carolina depend on the estuary as nursery habitat.

Our hunters need the clean waters that develop the food that attracts the waterfowl to our coast.

But clean water is not the only prerequisite for success. Access is just as critically important. Our inlets and ports are vital access points to the industries that rely on the water to be successful. Over the past few years we have begun to recognize our waterways as a vital infrastructure that is needed to support our coastal businesses. Whether it is in Morehead City or Oregon Inlet or along our

ferry routes, we are finally realizing that our channels are an important infrastructure that needs constant maintenance and investment. It is time that we looked at clean water the same way.

When most of us think of infrastructure we think of roads and bridges, utilities, and government services. They fit clearly and easily within the common definition that infrastructure is “an underlying base or foundation especially for an organization or system.” I fail to see how clean water is any different.

If tourism, our estuaries, our fishing community, and hunters all rely on clean water than it is truly the base in which they are built upon. Yet we allow the discussion about clean water to be dictated as a fight between progress and environmental protectionism. We become mired in the perceptions and actions of our foes and neglect to join forces for what will benefit us both.

While we need to be working together, there is rarely a solution that makes everyone happy. We argue on riparian buffers, inland waterway setbacks, fishing quotas, and wetlands projects. The answer to clean water is complex and multifaceted and it seems there are as many opinions and studies as there should be oysters in the water. We need to take steps to improve our water quality and our habitat but we cannot agree on a good first step.

As we seek answers in the legislature I recognize that we are not always the brightest and we can be easily confused. So, I often look for a basic piece of information that will help boil down all the data and point me in a common sense direction. In this case I believe that statistic is “50 gallons a day.” Everyone in this room knows what I am talking about; it is the amount of water one adult oyster cleans per day. I was amazed the first time I saw cloudy Wanchese water enter a tank of oysters and leave the other side crystal clear. Oysters can be part of the answer to creating more clean water and do it in a way that will satisfy all sides.

Since I am talking to an audience that knows a lot more about oysters than me, I will speak to the other novices in the room for a moment about a study that was released in 2013 by the Virginia Institute of Marine Science. It showed that an area seeded with oysters removes 20 times the nitrogen produced from fertilizer

run off over a year, than an unseeded area. Nitrogen is the main culprit of the oxygen dead zones that have plagued our fisheries. Oysters also eat phytoplankton that produce the algae blooms that further deprive our system of oxygen and make our waters murky.

The beautiful thing about oysters is that they do more than just clean our waters. They also provide habitat that help to make our estuaries more productive. I once visited an oyster fishery off of Bodie Island and when the cage came up I saw crabs, shrimp and fish that were using the area as shelter. Again, being a bit simple, I felt that oyster fisheries and reefs would have to protect hundreds of species. I was a bit off, according to the same study an oyster reef contains over 24,500 species.

And then there is the benefit of putting people back to work. Our commercial fishing industry has shrunk over the past several decades. The federal regulations continue to shrink the bottom line and make it more difficult to operate. Our working watermen are part of our cultural heritage. Sons, and now daughters, have followed the footsteps of their parents finding a life on the water to be rewarding both financially and personally. Oyster fishing and aquaculture can help provide employment for those that have had to leave the fishing industry.

Oysters have one final benefit and it is the one topic that I feel I have done enough field research to be credible about... they taste darn good. Sure they are sustainable, they clean our water, and they put people back to work but they are also one of my favorite foods to eat.

But North Carolina is not getting our fair due on this subject.

I recently picked up a book on oysters by Rowan Jacobsen called A Geography of Oysters. There were 10 sections talking about oysters from Oregon to International Waters. The one area that was noticeably missing was a section on North Carolina. From Crab Slough, to Top Sail Selects, to Lockwood Folly, to Stump Sound, to Bodie Island oysters he missed the best in the world. All of those types I mentioned are the simple *Crassostrea Virginica*, just like any other oyster

along the Atlantic, but these have been given the benefit of growing in North Carolina waters and being turned into the best around.

So, we have the best eating oysters that also help to clean our waterways (which is a vital infrastructure), they provide habitat, and they help put people back to work yet we lag behind many states in our investment of oyster aquaculture and fisheries.

For the past several months I have been working with other representatives, stakeholders, and Marine Fisheries on a bill that I hope will begin to change that fact by establishing the priorities of how to put North Carolina Oystering on solid footing. The bill has several parts that include a study on the cost and benefit of using either the UNC-W or Core Sound hatchery to produce North Carolina oyster seed. This will cut down on the regulation and cost of obtaining out of state product.

We look to make the newly established sanctuaries more efficient so that we are protecting the areas that oyster fishermen actually want to use. We are asking for tougher penalties for theft of oyster fisheries and fishing on protected grounds. One provision that remains a point of contention has been what type of expansion of oystering might be appropriate in Core Sound. I am continuing to work closely with Representative McElraft to see if we can develop a plan that works.

I hope you will take some time to look at the bill once it is submitted and provide me your feedback as we anticipate making changes as we move through the process. Please view this first draft, not as a mandate, but as the beginning of our collaboration. If there is something in the bill I have neglected to pursue, I want to know. Likewise, if I done something that unintentionally hurts our efforts, I want to hear about it as well.

Unfortunately, we at the state level cannot accomplish everything we need without getting some concessions from the Federal Government. One particular issue surrounds Submerged Aquatic Vegetation. The Corps of Engineers in Wilmington has put a requirement on North Carolina that is different from Virginia saying we cannot issue a lease with a single blade of grass on it. Recently I have worked with both Congressman Jones and Senator Tillis who have asked that Wilmington adjust their requirements to be more in line with Virginia's.

I know that oysters are not the only answer to clean water. The Coastal Federation will be talking about the benefits of restoration both at the breakfast tomorrow and during one of the breakout sessions.

Regardless of the approach, however, clean water must be recognized as a critical part of infrastructure that supports our fisheries and tourism while it provides the environment to feed our people. It is time that we invest in common sense initiatives that will help to make oysters "lay thick as stones," fish more plentiful "than could be devoured by dog or man," and water so clear that you could easily see the bottom.