

LEGAL TIDES

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Looking to the Future of Oyster Aquaculture in North Carolina

A Comparison of Regulations among Mid-Atlantic States

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Oyster aquaculture recently has boomed across the Mid-Atlantic. The industry's success varies across the region because of factors such as investment in aquaculture science and technology, ecosystem conditions, entrepreneurial culture, and regulatory differences among the states.

Virginia boasts an oyster aquaculture industry that produced more than \$17 million in farm-gate value in 2014. Maryland and New Jersey are expanding their oyster aquaculture industries quickly as well. In comparison, North Carolina's 2014 farm-gate value was less than \$500,000, according to the N.C. Division of Marine Fisheries, or NCDMF.

The bright spot in this data is that North Carolina has the potential to develop its oyster aquaculture industry to Virginia's level. North Carolina has ample and high-quality coastal waters with salinity levels in which oysters thrive. It is important to note that in 2005, Virginia and North Carolina had similar-sized industries, with farm-gate values hovering around \$250,000 for both states.

Growing the North Carolina oyster industry presents a huge economic

opportunity for the state to generate revenue and jobs in coastal regions. Oyster aquaculture also benefits the environment and improves water quality. Each oyster filters about 50 gallons of water daily, consuming phytoplankton while removing other substances like dirt and nitrogen. In fact, oysters are one of the few aquaculture products that leave water cleaner by their production. Since 2003, a group of stakeholders from varied government agencies, growers and aquaculture partners from related industries has been working to strengthen the industry in North Carolina by creating an evolving action plan for oyster industry growth.

While the template for expansion of North Carolina's oyster aquaculture industry is in place, regulatory differences are one reason why the state's oyster industry is growing slower than Virginia's. Maryland and Virginia have spurred industry expansion by streamlining their regulations and providing resources to help current and potential growers. This issue of *Legal Tides* will address these regulatory differences for oyster aquaculture leasing

programs and their effects on aquaculture development in North Carolina, Maryland, New Jersey and Virginia.

Why Leases?

Oyster growers in North Carolina who want to develop or expand their businesses must lease tracts of water and pay annual fees to the state. In addition, these leases are subject to inspection by government entities. Growers cannot own the area outright because leased-water rights for oyster aquaculture are subject to the Public Trust Doctrine. This legal doctrine holds that no person shall own the navigable bodies of water of the United States, as well as any beachfront sand (either up to the mean high-water mark or mean low-water mark). Instead of individual ownership, these waters are held in trust by the federal and state governments for use by the public. North Carolina defines public trust rights as "rights held in trust by the State for the use and benefit of the people of the state in common."

The major tenets of the Public Trust Doctrine differ from state to state, but in each instance, use of public trust waters

for businesses is allocated in the form of a lease or permit. Such leases allow individuals to restrict others access to their leased area. In return, the individuals usually are required to make beneficial use of the leased waters, for example through activities such as shellfish aquaculture. Regulations that govern oyster aquaculture leases vary by state.

North Carolina's Oyster Lease Requirements

North Carolina's oyster lease program has been slow to expand, while efforts in other Mid-Atlantic states have grown in recent years. This is partially due to strict requirements under Nationwide Permit 48, put in place by the U.S. Army Corps of Engineers, or ACOE, which applies regional conditions to North Carolina that are not required in other states. This permit establishes ACOE authority over shellfish aquaculture activities in public trust waters.

Prior to May 19, 2015, the ACOE Wilmington District banned leases in areas with any presence of submerged aquatic vegetation, or SAV. As such, in North Carolina, proposed oyster leases often were in conflict with the presence of SAV. These regional conditions are in the process of being updated for 2017 (see page 3).

Another regulatory challenge stems from the typically lengthy application process. Oyster growers in North Carolina must apply for lease approval through the NCDMF, in addition to the ACOE. Also, siting requirements may require individual surveys on a case-by-case basis, a step other states have eliminated. The timeline from application to approval — a nine-step process — often can take months or years to complete.

The following sections detail how Virginia, Maryland and New Jersey have simplified their leasing processes. Their examples might provide some lessons for North Carolina as the state moves to

strengthen its oyster aquaculture industry.

Virginia Streamlines the Application Process

Through a permitting system, Virginia has streamlined the application process for oyster growers. Unlike the individual application process for leases in North Carolina, Virginia predesignates areas that are suitable for aquaculture. The grower then only needs to apply for a permit with the state in order to establish a new operation. If he or she applies for a permit outside of a preapproved location, the state will seek approval from the ACOE on behalf of the prospective grower.

In addition, Virginia has no permit or leasing requirement for bottom growth of oysters, as long as cages do not rise more than 12 inches from the bottom. This regulation helps new growers establish their operations independent from state supervision while in the start-up phase of their business.

Water-column leases still require a multistep process in Virginia because rights to the bottom must be obtained in order to use the water column. In addition, the farmer must obtain General Permit #4 from the Virginia Marine Resources Commission. This permit sets forth the regulations for shellfish-growing enclosures in the water column, including racks and cages that do not sit on the bottom nor float at the surface. Floating enclosures are not covered by this permit. The placement of enclosures may not interfere with navigation channels or riparian rights of boaters, other fishermen and riparian landowners.

Additionally, this permit regulates how shellfish-growing enclosures interact with existing SAV. Generally, the permit prohibits equipment from being placed in "SAV beds." However, the statute gives no definition of SAV beds or the density that triggers the prohibition. The Virginia Institute of Marine Science estimates the effects of aquaculture on SAV at a

given location and recommends whether a lease would be disruptive for each proposed lease or prior to sites becoming preapproved.

Maryland Establishes Aquaculture Enterprise Zones

Maryland has worked for more than a decade to solve regulatory issues associated with oyster leasing. The two Maryland-specific solutions most applicable to North Carolina are the co-mingling of state regulatory agencies and the establishment of Aquaculture Enterprise Zones, or AEZs. These actions have enabled Maryland to streamline its lease process and reduce the number of steps growers must take to establish their businesses.

In 2011, Maryland conjoined the oyster-leasing efforts of the Maryland Department of Agriculture and the Maryland Department of the Environment into the Aquaculture Division of the Maryland Department of Natural Resources, or DNR. Previously, potential growers had to receive approval from six different state and federal agencies before being granted a lease.

Along with this, Maryland has preapproved areas for aquaculture under COMAR 08.02.23. This statute, enacted in 2009, designated 176 acres as AEZs for such purposes. AEZs function much like a sublease of public trust waters from the state to individual growers. The Aquaculture Division acquires all permits necessary from the ACOE, and approves areas that comply with state regulations. The grower must submit an application to the Maryland DNR to lease a preapproved location. This removes the need to survey individual leasing sites on a case-by-case basis. This process also helps the grower, who has to submit only one application for approval instead of having to obtain federal permitting separately from state approval.

The AEZ program and streamlined

application process have encouraged the growth of oyster aquaculture in Maryland. From 2010 to 2014, the total number of leases grew from 250 to 318, and leased acreage increased from 2,245 to 3,993.

New Jersey Grows Quickly with Aquaculture Development Zones

In the past decade, New Jersey has revamped the state's oyster aquaculture industry by enabling collaboration among several state agencies, advisory groups and state universities. The New Jersey Department of Environmental Protection (NJDEP) Division of Fish and Wildlife, N.J. Aquaculture Advisory Council, N.J. Shellfisheries Council and Rutgers University worked together to create a successful proposal to implement Aquaculture Development Zones, or ADZs, a concept similar to AEZs. The program was authorized in 2006, but not actually implemented until 2012, after the state finalized the permitting process. Four locations, totaling 1,250 acres, have been established as ADZs. Started as a pilot program to test the concept's effectiveness, growers may obtain a water-column lease up to 10 acres for a 5-year period.

The process for growers to obtain the lease is fairly simple. The NJDEP Division of Land Use Regulation, or DLUR, acquires the general permits for the ADZ zones. DLUR then subleases to applicants through a lottery process, along with determination of eligibility and approval of business plans by the Bureau of Shellfisheries.

This system has effectively increased the acreage of aquaculture leases, as well as the total number of leaseholders. Prior to ADZ approval in 2005, New Jersey had 163 leases. As of 2016, this number has grown to 851 with 2,237 total acres.

Lessons for North Carolina

Introducing AEZs

While each state has different



growing conditions and factors that affect the output of their respective oyster industries, a common theme among states with successful oyster aquaculture is implementation of AEZs to streamline the leasing process. The concept puts the onus on the state to seek approval for permitting in public trust waters, instead of individual growers navigating the process.

This regulatory change could jumpstart the North Carolina oyster aquaculture industry by removing barriers and shortening the process currently required for growers to have leases approved. Growers may be more willing to enter the industry if the barriers are lowered. In addition, the state could reap the fruits of the economic and environmental benefits provided by increased oyster production.

The implementation of an AEZ program in North Carolina would make the state the only authority responsible for subleasing to applicants in these preapproved areas, rather than the multiple state and federal entities that currently are involved in the process. An AEZ-permitting program also would lower costs for the state and growers alike by eliminating the need for individual site inspections that expend state resources. Rather, a site inspection would occur once over the whole tract of water proposed as the AEZ.

Location is the key for successful AEZs. Ideally, to encourage a high

density of leases, AEZs should be located in more populated areas to provide easy access. Oyster growers could be more likely to request leases in areas that are closer to them.

Managing Conflict on the Bottom

SAV improves water quality and provides habitat for fish. Some signs point to the gear used in oyster aquaculture as beneficial for SAV growth, but more research is needed to find a conclusive answer.

Conflict of use regarding SAV is a complicated issue because regulations pertaining to SAV are not entirely controlled by the state. The ACOE has federal jurisdiction over public trust waters. Since the ACOE is tasked with governing and managing the navigable waters nationwide under U.S. constitutional authority, the ACOE's authority supersedes North Carolina's regulations of the state's waterways.

The regional conditions for SAV are currently in an interim agreement between the ACOE Wilmington District and the state, with a more permanent regulation to be implemented in 2017 by ACOE. This interim agreement — allowing for leases in which 15 percent or fewer samples taken contain SAV — is less restrictive than the zero-tolerance policy on SAV interference previously in place. This update could be good news for oyster growers in North Carolina.

States without the regional conditions required through ACOE Nationwide

Permit 48 take the approach of banning shellfish leases in areas that are deemed SAV habitat. Maryland is the only state that mentions a specific density in defining SAV habitat areas. The other states take a case-by-case approach to determine if an area is covered by this prohibition. Virginia takes into account the potential negative impact on SAV and weighs that against the positive economic and environmental effects of an aquaculture lease. Maryland provides resources for continued mapping of SAV areas in order to have up-to-date siting information for potential lease sites.

Conclusion

North Carolina's oyster aquaculture industry seems to be at a crossroads. There is potential for tremendous growth given the abundance of unused public trust waters — historically known as productive oyster habitat — that could

be leased in the second-largest estuary in the country. Additionally, current demand for oysters in North Carolina is served primarily by growers in Virginia, the Gulf states and the Pacific Northwest. In a market that craves local seafood — and oysters in particular — this represents a huge opportunity for the oyster aquaculture industry.

Growth in the industry could provide a well-needed economic boost to North Carolina coastal counties that currently lack a diverse range of industries, often relying on seasonal tourism. A systematic overhaul of regulations of the oyster lease program could help spur that growth.

Other Mid-Atlantic states have had success in recent years with the growth of oyster aquaculture. Virginia, in particular, has seen an explosion in growth. This difference in development is partly a factor of the regulatory structure in North

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Carolina.

Loosening regulations to site oyster leases in areas with some SAV, streamlining the lease approval process and implementing AEZs may spur industry growth in North Carolina. These changes could amount to a major step in enabling the North Carolina's oyster aquaculture program to compete with our neighbors to the north.

References

For a list of references, go to go.ncsu.edu/oe9rcd.