



2021 OYSTER MARICULTURE IN GEORGIA:

Updates to the Legal and Regulatory Framework



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GRAPHIC & PUBLICATION DESIGN:
KELSEY BROICH, UNIVERSITY OF GEORGIA



HUNT REVELL, *Author*

Law Student,
GEORGIA STATE UNIVERSITY

Legal Fellow (2021),
GEORGIA SEA GRANT



KATIE HILL, *Editor*

Research Professional,
UNIVERSITY OF GEORGIA
CARL VINSON INSTITUTE
OF GOVERNMENT

Hunt Revell is a third-year law student at Georgia State University College of Law and 2021 Georgia Sea Grant Legal Fellow. He has done legal work for the University of Georgia's Carl Vinson Institute of Government, Georgia Heirs Property Law Center, and Augusta's Hull Barrett law firm. Prior to attending law school, Hunt served as a manager for Athens' Seabear Oyster Bar, program coordinator for student academic services at UGA, and environmental education associate for the Governor's Island Alliance and New York Harbor School. He holds two interdisciplinary degrees: a master's degree in Liberal Studies from the New School for Social Research and a bachelor's degree in Political and Social Thought from UGA's Honors Program. He plans to use his law degree and experience to promote the environmental sustainability of oysters, support urban and rural community development, help friends, and take down the bad guys.

As a research professional in the Planning and Environmental Services unit at the University of Georgia Carl Vinson Institute of Government, Katie Hill helps governmental clients at the local, state and national level develop solutions to environmental challenges and take advantage of opportunities. An attorney who joined the Institute of Government in 2020, Katie works on projects concerning environmental policy analysis and development, natural resource planning, climate resilience, land use, wastewater infrastructure and land conservation. Prior to joining the Institute, Katie was a legal associate at the University of Georgia River Basin Center, where she worked on a wide range of environmental policy and planning projects and authored guidebooks on local wetlands protection, coastal wastewater management and ad valorem taxation of conservation easement properties. Katie is a member of the 2018 class of the Georgia Institute for Environmental Leadership and is a former member-at-Large for the Environmental Law Section of the State Bar of Georgia.



The demand for farmed oysters remains high, and Georgia's oyster law has the potential to produce substantial benefits if the State's watermen, regulators, industry stakeholders, and coastal residents continue to work together toward shared goals.



Executive Summary

Prior to 2019, Georgia law only allowed the leasing of state-owned intertidal waters to commercially harvest wild oysters. Georgia’s 2019 oyster law amended state law to allow leases for oyster farming, also known as oyster mariculture, which utilizes “on-bottom” cages in shallow, intertidal waters and “off-bottom,” floating cages in deeper, subtidal waters. The new legal framework—a combination of the 2019 law, regulations adopted by the Department of Natural Resources Coastal Resources Division (CRD) in 2020, and CRD’s May 2021 Shellfish Policy Manual guidance—creates the mechanisms for obtaining these intertidal and subtidal leases from the State to establish oyster farms. In June 2021, CRD conducted its first official subtidal lease lottery for the “Mud River Mariculture Zone” near Sapelo Island and issued the State’s first three modern floating oyster farm leases shortly thereafter. These subtidal leases have the unique potential to create a sustainable supply of farmed oysters more suited to the modern half-shell market already tapped in other coastal states.

Georgia’s new legal framework also designates several permits, including a new shellfish mariculture permit and corresponding cage permits for modern oyster farming equipment, as well as future plans for summer, “closed season” harvest and out-of-state oyster seed importation permits. With further details for application processes, production requirements, management plans, “cultch” or recycled shell deployment, and certification checklists, the law also more broadly impacts the State’s ability to rebuild its historic oyster industry and utilize its oyster resource to enhance coastal resiliency, both ecologically and economically. The demand for farmed oysters remains high, and Georgia’s oyster law has the potential to produce substantial benefits if the State’s watermen, regulators, industry stakeholders, and coastal residents continue to work together toward shared goals.

... the law also more broadly impacts the State’s ability to **REBUILD** its historic oyster industry and utilize its oyster resource to **ENHANCE COASTAL RESILIENCY**, both ecologically and economically.



OYSTER MARICULTURE IN GEORGIA: **Updates to the Legal and Regulatory Framework**

In the spring of 2019, Governor Brian Kemp signed HB 501 into law, establishing the statutory framework for commercial oyster farming in Georgia’s coastal waters.¹ Until that point, Georgia law only provided for the lease of state-owned intertidal waters for commercial harvest of *wild oysters*. HB 501 amended state law to allow leases for *oyster farming*, also known as oyster mariculture, utilizing “on-bottom” cages in shallow, intertidal waters and “off-bottom” floating cages in deeper, subtidal waters. The 2019 law and corresponding regulations adopted in 2020 clarify the process for obtaining these leases from the State to use “water bottom” property and the specific permits that describe how that property may be used, as well as a number of other considerations important to the sustainability of the oyster farming industry.² The purpose of this white paper is to describe these changes to Georgia’s oyster law.

We first provide some environmental, economic, and historical context for Georgia’s oyster business. Second, we explain how intertidal and subtidal leases are selected and awarded. Third, we discuss the new mariculture permitting schemes. Fourth, we review the new rules for summer harvest and out-of-state oyster seed regulation. Several appendices contain the latest information regarding the subtidal lease lottery and priority point systems, the new Mud River subtidal lease site or “Shellfish Mariculture Zone,” and a brief overview of other state programs. The appendices will be updated as Georgia’s program evolves.

1 2019-2020 Regular Session – HB 501 Game and fish; provide for mariculture development, Georgia General Assembly, <http://www.legis.ga.gov/legislation/en-US/Display/20192020/HB/501> (Last visited March 16, 2021).

2 For more information, see Danielle Goshen, *Growing Oysters in Georgia: An Overview of the Legal Framework in Overcoming Obstacles to Shellfish Aquaculture through Legal Research and Outreach: Case Studies*, National Sea Grant Law Center (March 2019), <http://nsglc.olemiss.edu/projects/shellfish-aquaculture/files/casestudies.pdf>. We also are indebted to the research done by Chris Bertrand on HB 501 and other state oyster programs.

I. BACKGROUND AND OVERVIEW: OYSTERS ON THE HALF SHELL

Georgia's one-hundred-mile coastline contains approximately one-third of all the salt marshes on the Eastern Seaboard.³ Salt marshes are some of the most biologically productive systems on earth.⁴ This fact, along with Georgia's seven foot tides and excellent estuarine water quality, make the Georgia coast an ideal place for producing oysters.⁵ In fact, in the early 1900s, Georgia led the nation in harvesting wild oysters for canning.⁶ By the 1930s and 1940s, however, the canning industry had rapidly declined.⁷ While questions remain as to whether that decline was due to overharvesting, fishery mismanagement, or decreasing demand for canned oysters, oyster canning was all-but-gone by 1980, with wild oyster harvests significantly decreasing.⁸

While Georgia's wild oyster population is in good shape, market demand now calls for farmed oysters on the half-shell.⁹ Wild oysters naturally produced by Georgia's tidal environment are clumped and muddy with thin, jagged, and brittle shells that are difficult and time-consuming to clean, separate, and shuck (See Figure 1), perfect for roasts, but not ideal for the half shell market.¹⁰ Farmed oysters, on the other hand, can be manicured into smooth, detached "singles," a shape and size that is easier to clean and handle, making them preferable for half-shell consumption (See Figure 2).¹¹ Today, restaurants and bars around the country sell farmed oysters on the half-shell in a vibrant oyster economy with substantial tax revenue from the West Coast to Alaska to Maine to Florida to Texas.¹²

A sustainable oyster mariculture industry in Georgia could produce a marketable farmed product that does not deplete or destroy the State's wild oyster stocks, as may have occurred in the past.¹³ In fact, a sustainable oyster mariculture industry could continue to allow the wild stock to flourish and provide corresponding saltwater marsh ecosystem benefits like enhanced water quality through filter feeding, habitat creation, erosion prevention, and storm surge protection, especially if conducted with such goals in mind.¹⁴ Even further, wild oyster reefs and living shorelines engineered from recycled oyster shell may be able to effectively and economically remediate future erosion and flooding expected from rising sea levels.¹⁵ Georgia's 2019 oyster law, therefore, not only allows Georgia to participate in the burgeoning oyster farming industry, but also to revitalize part of its coastal history and build a more resilient future.

3 Salt Marsh Ecology, Marine Extension and Georgia Sea Grant, <https://gcoast.uga.edu/about/georgia-coast/salt-marsh-ecology/> (Last visited April 12, 2021).

4 Charles Seabrook, *Tidal Marshes*, New Georgia Encyclopedia <https://www.georgiaencyclopedia.org/articles/geography-environment/tidal-marshes> (Last visited April 12, 2021).

5 See Andre Gallant, *Georgia's Wild Oyster Harvest*, *Southern Cultures* (Spring 2008), <http://www.southerncultures.org/article/georgias-wild-oyster-harvest/>; see also T.D. Matthew, et. al., *Ecological characterization of the Sea Island coastal region of South Carolina and Georgia. Volume 1: Physical features of the characterization area*, U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. p. 212 (1980) (finding mean 7.2-foot tide with a range of 4.2 – 11.2 feet); Power et. al., *A Caution Against Interpreting and Quantifying Oyster Habitat Loss From Historical Surveys*, *Journal of Shellfish Research*, Vol. 29, No. 4, 927–936 (2010) (finding oysters reach their greatest density and biomass in southeastern tidal creeks and sounds, where intertidal oysters may even be more resistant to or tolerant of disease and pollution due to physiological adaptation to survive extreme temperatures during low tide exposure).

6 *Georgia Oyster History*, Coastal Resources Division, <https://georgiawildlife.com/sites/default/files/crd/KTC/files/GeorgiaOysterHistory.pdf> (Last visited April 6, 2021).

7 Mary Landers, *Georgia perfects the lonely oyster*, *Bluffton Today* (January 20, 2016), <https://www.bluffontoday.com/latest-news/2016-01-20/georgia-perfects-lonely-oyster>.

8 See Duane Harris, *Survey of the Intertidal and Subtidal Resources of the Georgia Coast*, Georgia Department of Natural Resources Coastal Resources Division (May 1980) (noting that Georgia wild harvest oyster landings have often fluctuated widely year-to-year but arguing that various factors, including failure to "re-seed" coastal waters with cured oyster shell, disease, pollution, lack of shellfish sanitation, riparian rights, closing of harvesting waters, and lack of labor all may have contributed to lower oyster harvests and a depleted oyster resource). But see Power et. al., *supra* note 5 (arguing declining trends in fishery landings may reflect the social and economic challenges associated with an unsustainable canning industry during the early 20th century and that the extent of historical change to oyster habitat in Georgia cannot be accurately described due to varying studies and methodologies, but hypothesizing that intertidal oysters may occur in greater abundance now than when first documented in 1891).

9 *Romancing the Oyster*, *The Local Palate* (February 3, 2020), <https://thelocalpalate.com/articles/romancing-the-oyster/> (Last Visited April 12, 2021).

10 Thomas Bliss and Randal Walker, *Reducing the Minimal-Legal Harvest Size of Oysters in Georgia*, OCCASIONAL PAPERS OF THE UNIVERSITY OF GEORGIA MARINE EXTENSION SERVICE Vol. 14, 2012, at 2 (finding an over-abundance of wild oyster spat in Georgia causes overcrowding on natural reefs and results in poor quality oysters that are "long, thin and narrow in shape"); Power et. al., *supra* note 5 (noting oyster habitat in Georgia is substrate-limited and not spat-limited).

11 *Next Generation Florida Oyster Farmers*, *Edible Orlando* (January 2, 2020), <https://www.edibleorlando.com/next-gen-florida-oyster-farmers/> (Last Visited April 12, 2021).

12 In 2019, Texas became the last coastal state to permit oyster farming, a few months after Georgia.

13 Bliss and Walker, *supra* note 10, at 10.

14 *Why Oysters? Ecosystem Engineers*, *Billion Oyster Project*, <https://www.billionoysterproject.org/ecosystem-engineers> (Last Visited April 13, 2021).



FIGURE 1: Wild Georgia Oyster Clumps

OYSTER FARMING

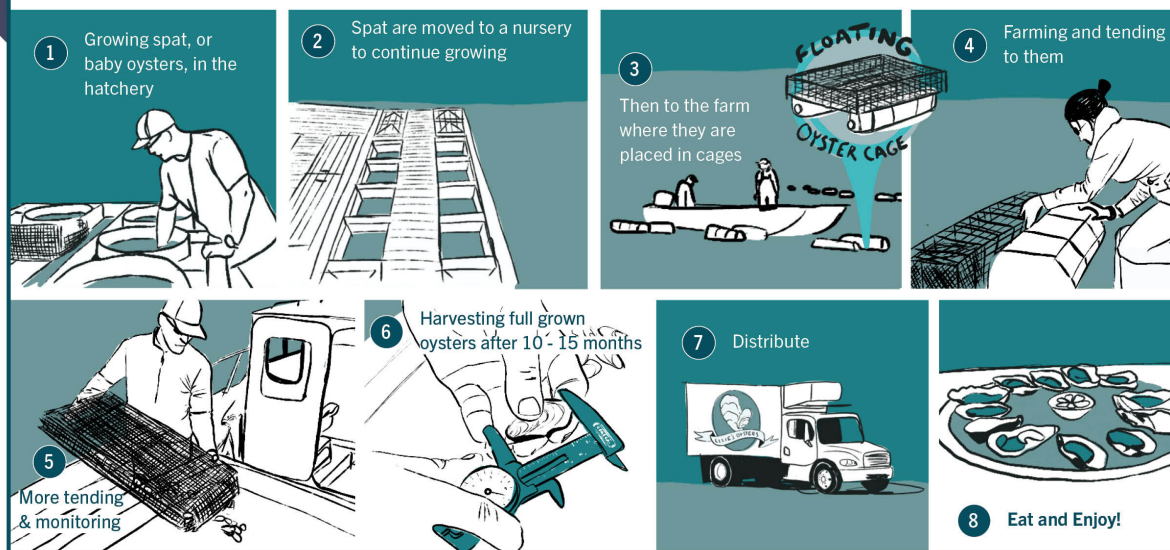


FIGURE 2: Life Cycle of a Farmed Oyster

II. LEASING WATER BOTTOMS FROM THE STATE TO FARM OYSTERS

Because the State owns most of Georgia’s coastal water bottoms, commercial oyster harvesting requires a lease from the State’s Department of Natural Resources (DNR) Coastal Resources Division (CRD).¹⁵ Georgia’s 2019 oyster law divides the leasing process into two distinct categories: intertidal and subtidal. The intertidal zone is the area located between the high tide and low tide mark, whereas the subtidal zone is the area located below the low tide mark, entirely submerged by water (See Figure 3). This distinction between tidal zones somewhat parallels the distinction between wild oysters and farmed oysters because wild oysters are traditionally collected from intertidal shellfish beds, whereas farmed oysters can be grown more efficiently in manufactured equipment, which will be the singular focus of subtidal leases (See Figure 4).¹⁶

Intertidal and subtidal leases have distinct application processes.¹⁷ Both types of lease, however, have annual fees with renewable ten-year terms that are transferable under certain circumstances.¹⁸ Prospective lessees, however, cannot propose their own lease sites.¹⁹ Rather, CRD selects all lease areas according

15 See Mississippi-Alabama Sea Grant Legal Program, *Inventory of Shellfish Restoration Permitting & Programs in the Coastal States* (Dec. 2014), <http://masglp.olemiss.edu/projects/files/tnc-report.pdf> (noting that the State of Georgia presumptively owns title to all intertidal water bottoms within its boundaries, but in limited circumstances marshlands may be privately held by citizens who can trace their title back to a “king” or “crown” grant from the English monarch; see also Terry West, *What are state-owned tidal waters and marshlands*, Georgia Public Policy Foundation, <https://www.georgiapolicy.org/issue/what-are-state-owned-tidal-waters-and-marshlands/> (Last visited April 6, 2021). Leases may also be obtained from private property owners adjacent to intertidal waters. These leases are beyond the scope of this paper but also require authorization and permitting from CRD. See Shellfish Policy Manual, Coastal Resources Division (Version 1.1, May 2021), https://coastalgadnr.org/sites/default/files/crd/Shellfish/Website/PolicyManual_v1.1_FINAL.pdf?utm_campaign=&utm_content=&utm_medium=email&utm_source=govdelivery&utm_term= (Last Visited July 9, 2021).

16 While oyster farming is now permitted on intertidal leases, the reverse is not true. Subtidal leases will not be used to harvest wild oysters, both because wild oysters typically do not grow in subtidal waters due to predators and parasites, and CRD regulations require siting subtidal lease locations away from wild oyster beds. In addition, the floating equipment pivotal to commercial oyster farming operations will only be permitted on subtidal leases, where it must be checked and managed regularly by the farmer to avoid crop loss.

17 Ga. Code Ann. § 27-4-198 (requiring intertidal lease advertisements by public bidding and subtidal lease advertisements by lottery); see Shellfish Policy Manual, *supra* note 16 (explaining intertidal lease advertisements will include a guidance document for submitting bid packages and allowing use of social media to advertise leases).

18 Ga. Code Ann. § 27-4-198(c-f) (2021) (establishing that intertidal and subtidal leases may not be transferred without CRD’s written approval and a \$50.00 transfer fee. Intertidal and subtidal leases may be inheritable and transferable to the lessee’s spouse, siblings, lineal descendants, or lineal ancestors without payment of a transfer fee if the lessee dies or is permanently and totally disabled).

19 Currently, states such as Florida, South Carolina, and North Carolina, as well as nearly all coastal mid-Atlantic and New England states, allow lessees to

to siting criteria, described below, including public notice and comment.²⁰ Lessee selection criteria and requirements are also different for each type of lease. Intertidal lease bid packages are primarily ranked and chosen according to management plans whereas subtidal leases are distributed by lottery.²¹ Any lease that involves mariculture activities, whether intertidal or subtidal, will be subject to production requirements, but intertidal leases used exclusively for wild harvest need only meet “cultching” requirements.²²

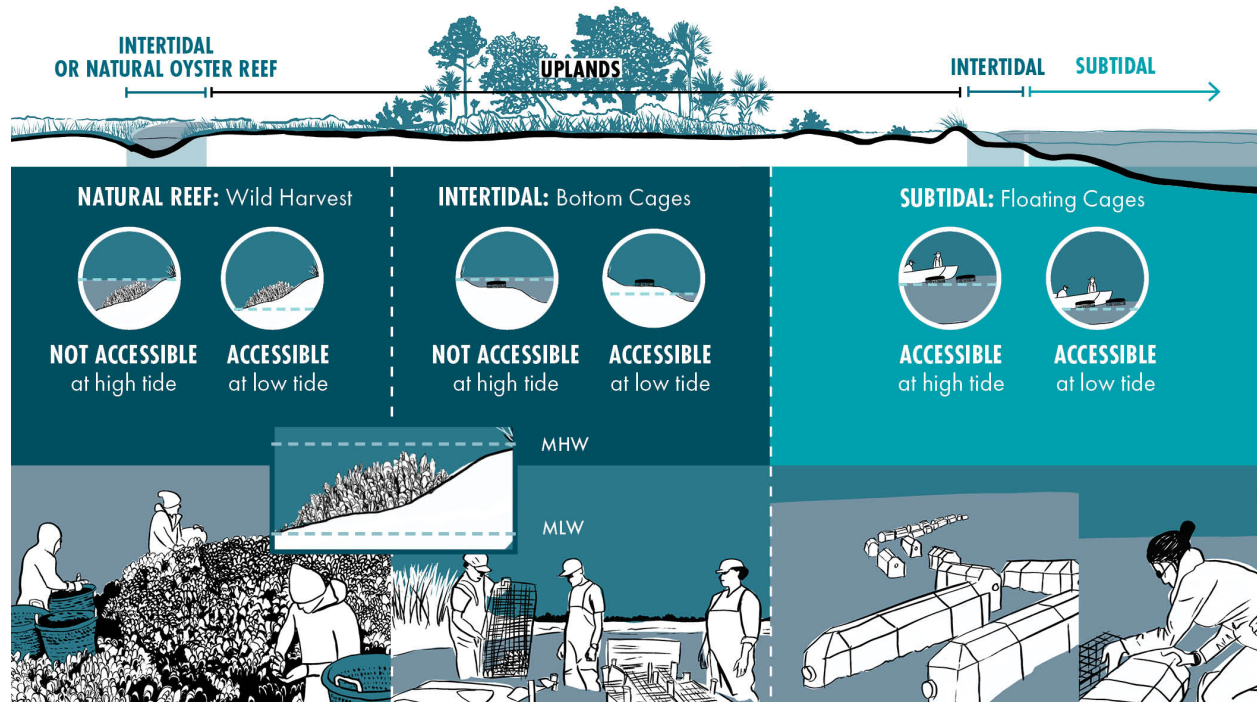


FIGURE 3: Intertidal and Subtidal Comparison

propose their own lease sites in approved growing areas. Industry advocates argue that a successful state commercial oyster farming industry depends upon oyster farmers being able to select their own lease locations in order to facilitate on-water and off-water operations. See Appendix E for an overview of other state programs.

- 20 According to CRD’s *Shellfish Policy Manual*, a leased “Harvest Area” will be authorized through a Master Harvest Permit for “an area that contains commercial quantities of shellfish and may include aquaculture sites and facilities.” These Harvest Areas will then be specified in intertidal and subtidal lease advertisements, with the subtidal areas having previously been vetted through public notice and comment. These areas will also be designated “Shellfish Mariculture Zones,” a related concept not yet defined by Georgia law, regulation, or policy. Other states have established “aquaculture use zones” (Florida-AUZ), “shellfish enterprise areas” (North Carolina-SEA), or “oyster parks” (Alabama/Mississippi) that cluster several oyster farming lease areas in close proximity. Georgia appears to be following these innovative developments. In other states, these areas, zones, or parks exist primarily to (1) streamline federal and state permitting, (2) anticipate or mitigate conflicts with other users of the state’s public trust resources, and (3) promote the industry. Other states, however, continue to maintain a designated process for prospective oyster farmers to propose new lease sites, even when they utilize cluster areas or zones. See Appendix E.
- 21 See *Shellfish Policy Manual*, supra note 15 (noting intertidal bid packages will be evaluated by a CRD committee outside of the shellfish program based on a combination of factors including husbandry techniques, legal knowledge, certifications, and property goals whereas the subtidal lottery’s priority points will be awarded “based on characteristics that make an applicant more likely to succeed, such as experience in the industry”); see also Appendix A for further subtidal lottery specifications.
- 22 *Id.* at 5-7. Intertidal leases may be used for wild harvest or mariculture or both. If both, the lessee must adhere to both “cultch deployment” (replacing shell or substrate to “re-seed” wild beds) and production requirements. Subtidal leases have more detailed and rigorous production requirements, including planting 10,000 oyster seed per acre of leased area per year. This number then increases by additional 10,000 seed per year until year 5 of the lease. See Appendix D.

OYSTERS	WILD	FARMED	ON-BOTTOM CAGES	OFF-BOTTOM FLOATING
<i>Intertidal</i>	Yes	Yes	Yes	No
<i>Subtidal</i>	No	Yes	Yes but unlikely	Yes and preferable

FIGURE 4: Relation Between Intertidal/Subtidal Leases and Wild/Farmed Oysters

A. *Intertidal Leases: Between Low and High Tide*

Under the old law that primarily governed wild oyster harvesting, prospective lessees obtained intertidal leases by sending an application to CRD indicating the area they wanted to lease, which had to be located in an “approved growing area.”²³ If CRD decided that the lease was in the “best interests of the state,” it launched a competitive bidding process and selected the bidder it considered “most advantageous to the state.”²⁴ When making this decision, CRD considered, among other things, management plans that showed how the potential lessee intended to manage the oyster resource.²⁵ If two applicants submitted equal bids, the law required CRD to prefer Georgia residents.²⁶

Under the new law, prospective lessees still submit management plans that show how they will work the lease area, but now this plan must also include a statement as to whether they plan to use the lease for wild harvest or mariculture (or both).²⁷ Applicants no longer propose their own intertidal lease locations.²⁸ Instead, CRD advertises pre-selected lease sites for competitive bidding in the county where the lease is located.²⁹ The minimum bid is \$15.00 per acre.³⁰ While CRD continues to select the bidder it considers most advantageous to the state, Georgia’s 2019 oyster law now requires CRD to prefer Georgia residents over nonresidents regardless of whether their bids are equal.³¹ Also, CRD “may consider an applicant’s previous performance and compliance with [applicable law]” when selecting winning bids.³²

23 Approved growing areas have always been statutorily defined as areas approved for shellfish harvesting. The new law simply incorporates mariculture and the National Shellfish Sanitation Program (NSSP) into that definition.

24 Ga. Code Ann. § 27-4-198(b-c) (West 1991) (prior to 2019 amendment).

25 Ga. Code Ann. § 27-4-198(a) (West 1991) (prior to 2019 amendment).

26 *Id.*

27 Ga. Code Ann. § 27-4-198(a)(2) (West 2021). CRD’s Manual indicates that management plan “ranking” provides the “primary means to decide who will be offered [intertidal] leases.” Shellfish Policy Manual, *supra* note 15.

28 Ga. Code Ann. § 27-4-198(a)(1) (West 2021) (offering intertidal leases in approved growing areas for the exclusive rights to harvest wild or maricultured, i.e., farmed, shellfish). The new law does not offer guidance for exactly where the available leases will be or precisely how CRD selects them.

29 Ga. Code Ann. § 27-4-198(a)(2) (West 2021).

30 *Id.* Under the previous law, no minimum rate for intertidal leases existed. Intertidal leases can be large, and the entire lease area may not get used each year, so this increased rate could present financial problems for some wild harvesters. See, e.g., *Intertidal Wild Harvest Oyster Lease Opportunity – Bryan County, Coastal Resources Division*, <https://coastalgadnr.org/intertidal-wild-harvest-oyster-lease-opportunity-bryan-county> (Last Visited May 12, 2021) (requesting competitive bids on 51 acre and 33 acre lease parcels for wild clam and wild oyster).

31 This “residency requirement” does not raise legal issues for the wild oyster resource but requiring in-state preference for a commercially farmed oyster product does implicate constitutional concerns under the Commerce and Privileges and Immunities Clauses. For example, the State perhaps could require out-of-state applicants to pay a higher fee, but it cannot unconstitutionally discriminate in favor of its own residents in interstate commerce, especially if it is not preserving its wild oyster resource for its own citizens. See, e.g., *Tangier Sound Watermen’s Assoc. v. Douglas*, 541 F. Supp. 1287, 1306 (E.D. Va. June 25, 1982) (holding that a Virginia law that only barred out-of-state residents from harvesting blue crabs in Chesapeake Bay was preempted by federal fishery licenses and violated the Privileges and Immunities Clause); see also *Toomer v. Witsell*, 334 U.S. 385 (1947) (finding that while the Privileges and Immunities Clause bars discrimination against citizens of other States where there is no substantial reason for the discrimination, it may not preclude disparity of treatment in situations where valid reasons for the discrimination exist, so long as the reasons are rational and tailored to legitimate state interests).

32 Ga. Code Ann. § 27-4-198(a)(3) (West 2021). “Previous performance” is not a defined term.

B. Subtidal Leases: Below Low-Tide

One of the most important changes in Georgia's 2019 oyster law is the creation of subtidal water bottom leases, which allow oyster farming in floating cages.³³ As with intertidal leases, CRD initiates the process by selecting and advertising areas for lease. When siting subtidal lease areas, the 2020 regulations require CRD to consider other uses of the State's waters, such as commercial recreational fishing, high boat traffic, riparian viewsheds, research sites, areas where property owners may exercise riparian rights to construct docks or marinas, and areas of dynamic shorelines and shoaling.³⁴ The regulations further specify that subtidal water bottom leases will be:

- (1) located in approved growing areas;
- (2) at least 200 feet wide at low tide;
- (3) at least six feet deep at low tide;³⁵
- (4) in areas that do not interfere with existing wild shellfish beds, "live bottoms,"³⁶ or salt marshes;
- (5) not within 150 feet of a federal project or "federally maintained channel";
- (6) not within fifty feet of an existing commercial, communal, or private dock; and
- (7) not within fifty feet of shoreline at low tide.³⁷

If a potential lease area is within or adjacent to critical habitat for marine, threatened, or endangered species, bait shrimping zones, or state Heritage Preserves, CRD must consult with appropriate local, state, or federal agencies to ensure the lease is compatible with those resources.³⁸

Unlike the public bidding in intertidal leases, the law requires CRD to issue subtidal leases through a lottery system.³⁹ In its May 2021 Shellfish Policy Manual, CRD established a priority point system for the lottery to choose winners at random from candidates with the highest tier of priority points, moving down by tier until all leases have been awarded.⁴⁰ Annual subtidal lease fees must be at least \$50.00 per acre.⁴¹ Appendix A describes this system in detail.

III. MINIMUM PERMITTING REQUIREMENTS FOR OYSTER FARMS

Georgia's 2019 oyster law also changed oyster permits. Several previously required permits remain, but the law creates new permits for oyster mariculture and the cages that are crucial to it. These two permits

³³ Ga. Code Ann. § 27-4-198(b) (West 2021).

³⁴ Ga. Comp. R. & Regs. 391-2-4-.18(e) (West 2021).

³⁵ The fact that floating gear is not permitted on intertidal leases and subtidal leases must be at least six feet deep effectively prevents the use of a "long-line" oyster farming system popular in Gulf States like Florida and Alabama.

³⁶ Live bottoms are rocky areas along the ocean floor, with ledges, reefs and ridges covered with invertebrates like algae, sponges, barnacles, and corals that live permanently on their hard surfaces and provide habitat for marine life.

³⁷ Ga. Comp. R. & Regs. 391-2-4-.18(6)(b) (West 2021).

³⁸ Ga. Comp. R. & Regs. 391-2-4-.18(d) (West 2021).

³⁹ Ga. Code Ann. § 27-4-198(b)(2) (West 2021). The new law and regulations do not offer details on how CRD will conduct the lottery, except to say that preference "may be given to certified firms, lease holders, and state residents." See Appendix A.

⁴⁰ At the March 2021 meeting of the Shellfish Advisory Committee, CRD outlined a point system for the lottery, which was published in May in CRD's *Shellfish Policy Manual*, allotting points for various categories. See *Shellfish Policy Manual*, supra note 15; see also *Lottery Application for Subtidal Shellfish Mariculture Leases*, Coastal Resources Division, <https://coastalgadnr.org/sites/default/files/crd/Shellfish/Website/Lottery%20Application5-7-21.pdf> (Last Visited May 12, 2021). Notably, while previous oyster farming experience remains a significant consideration in the State's new *subtidal* lease lottery priority point system, this experience can only be initially gained within the state of Georgia on *intertidal* leases. Although applicants can earn points for out-of-state mariculture experience, the lottery also prefers in-state residents. In-state residents with current *intertidal* mariculture leases and experience, therefore, will be significantly favored by the *subtidal* lease lottery and will have the first opportunity to take advantage of the floating equipment permitted by Georgia's 2019 oyster law.

⁴¹ Ga. Code Ann. § 27-4-198(b)(3) (West 2021).

will be required for every commercial oyster farm in Georgia. Subtidal leases also require permits from the U.S. Army Corps of Engineers and U.S. Coast Guard, but these federal permits are beyond the scope of this paper.

A. Existing Requirements

Georgia has required state-issued permits for individuals to harvest shellfish, including wild oysters, in commercial quantities or for commercial purposes since its initial shellfish law was adopted in 1991.⁴² These “master harvester” permits are also required for oyster farming.⁴³ A master harvester must have a shellfish lease, a Georgia commercial fishing license with a shellfish endorsement, and, if using a personal watercraft, a Georgia commercial fishing vessel license.⁴⁴ As part of its May 2021 Shellfish Policy Manual, CRD created checklists for both wild harvest and mariculture to organize this process, and each checklist highlights the fact that master harvesters must also obtain the appropriate Department of Agriculture (DOA) certifications.⁴⁵ In addition, master harvesters must apply in writing to CRD for their employees to receive “harvester” permits, and both CRD and DOA must approve each individual harvester.⁴⁶

B. Shellfish Mariculture Permits

Georgia’s 2019 oyster law also created a new Shellfish Mariculture Permit (SMP). Master harvesters must have an SMP before engaging in any oyster farming activities with “on-bottom” cages on intertidal leases or “off-bottom,” floating cages on subtidal leases.⁴⁷ As part of the SMP application, master harvesters must submit a mariculture operational plan that details:

- (1) species to be farmed;
- (2) types of gear;
- (3) amounts, locations, sources, and types of shellfish seed including genetic strains;
- (4) a storm mitigation plan;
- (5) a wildlife mitigation plan; and
- (6) any other information required by CRD.⁴⁸

42 Ga. Code Ann. § 27-4-190 (West 1991) (prior to 2019 amendment).

43 The permits were previously called “master collector” permits, and the employees working for the “master collector” were called “pickers.” Ga. Code Ann. § 27-4-190 (West 1991) (prior to 2019 amendment).

44 Ga. Code Ann. § 27-4-190(a) (West 2021). While the code section detailing requirements for master harvesters does not specify that they must have a lease, the law now defines “master harvester” as “a person who has acquired a lease with permission to grow or harvest shellfish from the state or from [a property] owner with exclusive rights to shellfish pursuant to [state law], who has been permitted by CRD. See Ga. Code Ann. § 27-4-188(10) (West 2021). Also, the commercial fishing vessel license is not technically required by statute, but practically speaking, a master harvester with a commercial fishing license cannot harvest or possess commercial quantities of shellfish for commercial purposes on either intertidal or subtidal leases without the master harvester or harvesters using a vessel.

45 See *Commercial Shellfish Harvest*, Coastal Resources Division, <https://coastalgadnr.org/commercialshellfishharvest> (Last visited July 1, 2021) (recently updated with Checklists on right-hand side bar). Georgia’s new statute also indicates at least some of these certifications are required, most likely the Department of Agriculture’s (DOA) Shellfish Sanitation Certificate, Wholesale Fish Dealer license, and Shellfish Dealer Certification. See Ga. Code Ann. § 24-7-190(a)(1) (“master harvester permits...shall only be issued to persons certified by the Department of Agriculture to handle shellfish,” unless special permission applies). Neither the statute, the regulations, nor the *Shellfish Policy Manual*, however, are explicit on the DOA requirements. See *Selling Seafood in Georgia*, Marine Extension and Georgia Sea Grant, <https://gacoast.uga.edu/wp-content/uploads/2020/01/1911-Selling-Seafood-in-Georgia-Web-PR-1.pdf> (Last Visited May 12, 2021) (providing an excellent table for appropriate licensing for commercial seafood businesses in Georgia).

46 Ga. Code Ann. § 27-4-190 (West 2021). Harvester permits are only issued to individuals working for a master harvester, and harvesters may only harvest from areas leased by a master harvester. All harvesters must also have a commercial fishing license and must carry their harvester permits with them when harvesting. CRD will not issue harvester permits to people who have violated the statute within two years of a permit application.

47 Ga. Code Ann. § 27-4-202(a) (West 2021). “On-bottom” cages are technically permitted by law on subtidal leases, but the main advantage of subtidal leases is the ability to use more efficient and less intensive floating gear.

48 *Id.* CRD appears to have incorporated these detailed requirements into the SMP application itself.

CRD also may attach conditions to SMPs related to shellfish production, operations, public access, use of the leased area, and corrective actions for any environmental degradation.⁴⁹ The SMP application also must include a map of the area to be farmed, with gear location and navigational signage placed, as well as sketches of gear and other equipment and facilities information.⁵⁰ If the SMP is for a subtidal lease, the master harvester must pay a \$20,000 performance bond.⁵¹ Performing mariculture activities in a harvest area without an SMP can result in a misdemeanor of a “high and aggravated nature” and revocation of any authorizations for at least three years.⁵²

C. Cage Permits

Georgia’s 2019 oyster law also requires oyster farmers who obtain an SMP to obtain “cage permits” for the gear they plan to use.⁵³ These cages could include the use of “on-bottom” (primarily intertidal) bags or cages, or “off-bottom” (exclusively subtidal) floating gear such as bags, cages, baskets, or nets. Cage permits, issued in 25-cage increments, establish the maximum number of cages that may be deployed on the permittee’s lease and cost \$1.00 per cage.⁵⁴ Cage permits have the same duration and are renewed at the same time as the SMP, so they cannot be amended except when being renewed.⁵⁵ CRD’s May 2021 Shellfish Policy Manual defines “cage” as a “containment unit of any size that contains or may contain oysters for commercial grow out including but not limited to cages, bags, or baskets,” and containment units that hold smaller units inside, such as cages with interior bags or compartments, only require permits and tags for the larger outer unit.

IV. REGULATING SUMMER HARVEST: MONTHS THAT DON’T END IN “R”

Another key addition to Georgia’s 2019 oyster law involves the potential to harvest oysters year-round. Most illnesses contracted from eating raw oysters occur in the summer, especially because of historically poor refrigeration and improper cooling procedures.⁵⁶ Known and approved methods now make summer harvest safer and help oyster farming businesses thrive, so a number of states, including Florida, South Carolina, and North Carolina, routinely authorize a regulated summer harvest season.⁵⁷

CRD may prohibit taking shellfish from any Georgia waters at any time to protect public health.⁵⁸ Under the old law, CRD restricted summer oyster harvest without exception, so a typical oyster “season”

49 Ga. Code Ann. § 27-4-202(b) (West 2021). CRD’s *Shellfish Policy Manual* now includes mariculture production requirements for both intertidal and subtidal leases. See Appendix D.

50 *Shellfish Mariculture Permit*, Coastal Resources Division, <https://coastalgadnr.org/sites/default/files/crd/Shellfish/Website/Shellfish%20Mariculture%20Application%205-7-21.pdf> (Last Visited May 12, 2021) (also stating that navigational signage requires notifying the U.S. Coast Guard and only DOA certified Shellfish Dealers with Wholesale Licenses may sell shellfish for human consumption).

51 Ga. Code Ann. § 27-4-202(c) (West 2021). As noted, *supra* at note 16, the relationship between oyster farming and intertidal leases, and its development into subtidal lease applications remains to be seen. See Appendix A.

52 *Shellfish Mariculture Permit*, *supra* note 50.

53 Ga. Code Ann. § 27-4-204(a) (2021).

54 *Id.* Currently, subtidal lease sites span 10 acres with a required production of 10,000 oyster seed per acre, which CRD estimates will require approximately 100 cages in year one of the lease to meet the 100,000 oyster seed required for the 10-acre lease. In this scenario, each cage would need to accommodate approximately 1000 oyster seed, and each leased acre should include 10 cages. As production requirements increase each year of the lease, growers may use as many as 50 cages per acre (or 500 cages total on a 10-acre lease) to meet these requirements, if placing the same amount of oyster seed in each cage. This production would net the “maximum” 50,000 oyster seed per acre that must be maintained for the duration of the lease. See Appendix D; see also *OysterGro*, *The Complete Farming System*, <http://www.oystergro.com/> (Last Visited April 12, 2021) (showing visualization of floating cages and oyster farm layout and also estimating the most sophisticated cages may house 1200-1500 oyster seed for “grow out”).

55 Ga. Code Ann. § 27-4-204(b)(1) (West 2021). The statute does not specify the allowed number of cages per lease but gives CRD the discretion to decide the maximum number of deployable cages that oyster farmers can use. Cages must also have the master harvester’s assigned identification number attached to them while deployed.

56 *Vibrio and Oysters*, Center for Disease Control and Prevention, <https://www.cdc.gov/vibrio/vibrio-oysters.html> (Last visited July 16, 2021); *Oysters and Vibriosis*, Center for Disease Control and Prevention, <https://www.cdc.gov/foodsafety/communication/oysters-and-vibriosis.html> (Last visited March 16, 2021).

57 Kit Pollard, *The old oyster R-month rule*, *Baltimore Sun* (June 10, 2014), <https://www.baltimoresun.com/entertainment/bs-xpm-2014-06-10-bal-the-rmonth-rule-for-eating-oysters-20140610-story.html>; *Next Generation Florida Oyster Farmers*, *supra* note 11; *Romancing the Oyster*, *supra* note 9.

58 Ga. Code Ann. § 27-4-195(a) (West 2021).

lasted from October to May, so long as the water temperature remained below 81 degrees Fahrenheit.⁵⁹ The new law reiterates CRD's ability to restrict harvest times but allows master harvesters to request permission to harvest during "closed" season.⁶⁰ A master harvester seeking permission must submit: (1) an approved closed season shellfish operation plan that meets requirements established by the board to be protective of public health; (2) a list of all trained harvesters; and (3) a list of receiving certified firms.⁶¹ When deciding whether a master harvester can harvest during "closed" season, Georgia's 2019 oyster law requires CRD to consider the individual's past compliance with state mariculture law and gives CRD the right to suspend or revoke closed season harvest permission for any violation of specified conditions.⁶² If the master harvester meets these requirements, CRD has created an official Closed Season Harvest Permit that "may be authorized according to Board rules and regulations."⁶³

V. FINDING GOOD OYSTER SEED: HATCHERIES AND NURSERIES

Oyster farming requires "planting" new oyster seed each year. Oyster seed production begins in hatcheries and nurseries with parent oysters releasing egg and sperm into a marine environment. The fertilized egg becomes an oyster larvae, which turns into "spat"—tiny baby oysters—that are the "seed" used by oyster farmers to grow into a marketable crop or product.⁶⁴ The most efficient way to procure this seed is directly from a hatchery or nursery, and though many such facilities exist along the Eastern Seaboard, the University of Georgia's Marine Extension and Georgia Sea Grant currently operates the one and only in-state hatchery.⁶⁵ As the oyster industry develops, oyster farmers may need access to additional seed, or a private hatchery may want to enter the Georgia market. Georgia's 2019 oyster law allows CRD to approve out-of-state hatcheries and nurseries to ship commercial quantities of quality oyster seed into the state.⁶⁶

CRD regulations offer some specifications for this process. Oyster seed cannot be larger than one inch.⁶⁷ Out-of-state hatcheries and nurseries must include a Certificate of Health from a DNR-approved pathologist who specifies the location, size, and species of the shellfish seed tested, includes a list of any diseases or pathogens in the seed, and proves the seed was tested within 30 days of entering the state.⁶⁸ CRD's May 2021 Shellfish Policy Manual goes further and establishes a Molluscan Shellfish Importation Policy for hatchery, nursery, and mariculture operations, as well as a required Shellfish Importation Permit.⁶⁹ The policy and permit only allow genetically native species, with an explicit exception for non-reproducing triploid seed.⁷⁰ To buy from an out-of-state hatchery or nursery, a master harvester must apply for and receive a Shellfish Importation Permit at least five days before importing seed. The out-of-state hatchery or nursery must be on CRD's pre-approved list that includes an annual application and inspection.⁷¹ The

59 Tyler Jones, *Georgia's oyster season opens Oct. 1*, The Brunswick News (September 21, 2016) https://thebrunswicknews.com/life/georgia-s-oyster-season-opens-oct/article_439d07eb-d4b0-573e-aebd-85b50a84c5f7.html ; *Georgia to Reopen Oyster Harvest in State Waters*, Georgia Department of Natural Resources Coastal Division (October 18, 2018) <https://coastalgadnr.org/georgia-reopen-oyster-harvest-state-waters>.

60 Ga. Code Ann. § 27-4-195(a-c) (West 2021).

61 *Id.* "Certified firms" as statutorily defined, refer to certification by the Department of Agriculture, and include but are not limited to "certified dealers, shellstock shippers, shuckers or packers, repackers, reshippers, depuration processors, and wholesalers." Ga. Code Ann. § 24-7-188(3) (West 2021).

62 Ga. Code Ann. § 27-4-195(d) (West 2021).

63 *Shellfish Policy Manual*, supra note 15 at 3.

64 *Georgia Perfects the Lonely Oyster*, Savannah Now, <https://www.savannahnow.com/article/20160116/NEWS/301169826> (Last visited February 12, 2021).

65 *Oyster Hatchery*, Marine Extension and Georgia Sea Grant <https://gacoast.uga.edu/outreach/programs/oyster-hatchery/> <https://gacoast.uga.edu/outreach/programs/oyster-hatchery/> (Last visited February 12, 2021).

66 Ga. Code Ann. § 27-4-203(b) (West 2021). The 2020 regulations also require that all hatcheries and nurseries providing shellfish seed to a leaseholder—whether in-state or out-of-state—receive certification from CRD. Ga Comp. R. & Regs. 391-2-4-.18(5)(a) (West 2021).

67 Ga Comp. R. & Regs. 391-2-4-.18(4) (West 2021).

68 Ga Comp. R. & Regs. 391-2-4-.18(5)(b) (West 2021). Hatcheries, nurseries, and master harvesters must each maintain copies of the Certificate of Health for at least three years. Importation records must be kept for two years.

69 *Shellfish Policy Manual*, supra note 15 at 12.

70 *Id.* Triploid seed oysters have three sets of chromosomes, while diploids have two. Three sets of chromosomes instead of the standard two makes the seed infertile and gives it the advantage of asexual reproduction, as well as quicker and more vigorous growth, because energy is not spent on sexual reproduction.

71 Ga. Code Ann. § 27-4-203(a-b) (West 2021). CRD's *Shellfish Policy Manual* further requires non-diploid oyster seed to have their "ploidy" verified, and triploid oyster must provide a guarantee of sterility. The *Manual* also specifies the excluded diseases by species, and CRD's website now has a link to the pre-approved

Manual also differentiates nurseries from hatcheries by their exposure to raw water or natural algae.⁷² All seed imports must be inspected by DNR or CRD and are subject to removal or destruction.⁷³

VI. CONCLUSION

With Georgia's 2019 oyster law, key new provisions are now in place to jumpstart the State's commercial oyster farming industry. These provisions include intertidal and subtidal leasing systems and shellfish mariculture and cage permits, as well as the potential for regulated summer harvest permits and imported oyster seed from out-of-state hatcheries and nurseries. CRD conducted its first official subtidal lease lottery in June 2021 for the "Mud River Mariculture Zone" near Sapelo Island and issued the first three oyster farming leases shortly thereafter. The demand for Georgia oysters remains high, and substantial economic and environmental benefits could accrue if Georgia watermen, regulators, legislators, industry stakeholders, and coastal residents continue to work together toward shared resiliency goals for the industry and coastal community. As they say, the world is our oyster.

out-of-state hatchery list. See *List of Approved Out of State Hatcheries and Nurseries*, Coastal Resources Division, <https://coastalgadnr.org/sites/default/files/crd/Shellfish/Website/List%20of%20Approved%20Out-of-State%20Hatcheries%20and%20Nurseries5-7-21.pdf> (Last Visited May 12, 2021) (no oyster seed providers yet).

⁷² *Shellfish Policy Manual*, supra note 15 at 13.

⁷³ *Commercial Shellfish Harvest*, supra note 46.

APPENDIX A – LOTTERY CRITERIA AND PRIORITY POINT SYSTEM

A. Lottery Minimum Criteria

At the March 2021 meeting of the Shellfish Advisory Committee, CRD announced its minimum criteria for entering the subtidal lease lottery and officially confirmed these criteria in writing in the May 2021 release of its Shellfish Policy Manual, which includes the Lottery Application and associated guidance.⁷⁴ With the goal of selecting law abiding applicants with adequate financial resources and to provide continued new subtidal mariculture opportunities, CRD requires that lottery applicants or firms must not (1) have any violations of CRD’s Game and Fish laws and regulations within the previous two years; must not (2) have “won” a lottery lease in the previous three years; and must not (3) currently lease more than thirty acres of subtidal water bottoms. If an applicant fails to meet any of the above conditions, the applicant will not be eligible for the lottery. In addition, lottery applicants must have (1) a valid Georgia commercial fishing license with a shellfish endorsement and (2) evidence of a \$70,000 bank instrument, examples of which include a Pre-Approval Letter, Proof of Funds Letter, or Line of Credit, each of which are defined in the in the Lottery Application.⁷⁵

B. Priority Point System

Noting that subtidal leasing opportunities in Georgia are limited, CRD developed a priority point system with the goal of selecting the most qualified individuals for these leases. The system awards 1 point for state residents (defined as continuous domicile within Georgia for a minimum of 3 consecutive months immediately prior to entering the lottery), 1 point for shellfish certification (firms may be certified by the Georgia Department of Agriculture (DOA) or National Shellfish Sanitation Program (NSSP) in other states), and 1 point for existing shellfish lease holders (importantly, CRD’s Manual indicates this factor includes leaseholders “in any state,” not just Georgia). The system also offers additional points for “experience with commercial molluscan shellfish operations,” which must be supported by landing, shipment, or receiving records, employment history with references, lease contracts, records of retail sales, or DOA certification.⁷⁶ Lottery applicants are awarded 1 point for 1-3 years of experience, 2 points for 4-7 years of experience, and 3 points for 8 or more years of experience. The total number of possible priority points is 6. Applicants are then placed into pools based on their total priority points and selected at

⁷⁴ See *Shellfish Policy Manual*, Coastal Resources Division (Version 1.1, May 2021) https://coastalgadnr.org/sites/default/files/crd/Shellfish/Website/PolicyManual_v1.1_FINAL.pdf?utm_campaign=&utm_content=&utm_medium=email&utm_source=govdelivery&utm_term= (Last Visited June 29, 2021); *Lottery Application for Subtidal Shellfish Mariculture Leases*, Coastal Resources Division, <https://coastalgadnr.org/sites/default/files/crd/Shellfish/Website/Lottery%20Application5-7-21.pdf> (Last Visited June 29, 2021).

⁷⁵ The \$70,000 figure is based off the estimated one-year cost of starting a subtidal mariculture farm using the University of Georgia’s Oyster Crop Budget Tool.

⁷⁶ It is not clear if or how this certification is different from the DOA shellfish certification required for permitting, but it could potentially involve the Georgia Wholesale Fish Dealer, Food Sales Establishment or Hazard Analysis and Critical Control Plan (HACCP) certification.

random from within their pool placement, beginning with the pool with the most points and continuing down through each point pool in order of decreasing priority points until all available leases are granted or applicants exhausted, whichever comes first.⁷⁷ The “winners” are then offered leases in the order determined by the lottery. CRD conducted its first lottery in June 2021 for the “Mud River Mariculture Zone” in McIntosh County and then issued the state’s first three commercial oyster farming leases.⁷⁸

⁷⁷ CRD’s May 2021 *Shellfish Policy Manual* includes additional details about the awarding of priority points. Lottery applicants may be individuals or firms, such as partnerships, LLCs, or corporations. Partner applicants must submit all information for each of the partners, including Game and Fish violations, previous subtidal leaseholders, and combined current leaseholder acreage rights. Partner bank instruments may be combined to reach the \$70,000 minimum. Priority points, however, will only be awarded once among partners, so Georgia residents, shellfish-certified firms, and current leaseholders will only be eligible for a maximum of 1 point in each category. Similarly, the “shellfish experience” point total will be allotted according to the partner with the most experience, not an aggregate or combined amount of experience in the partnership.

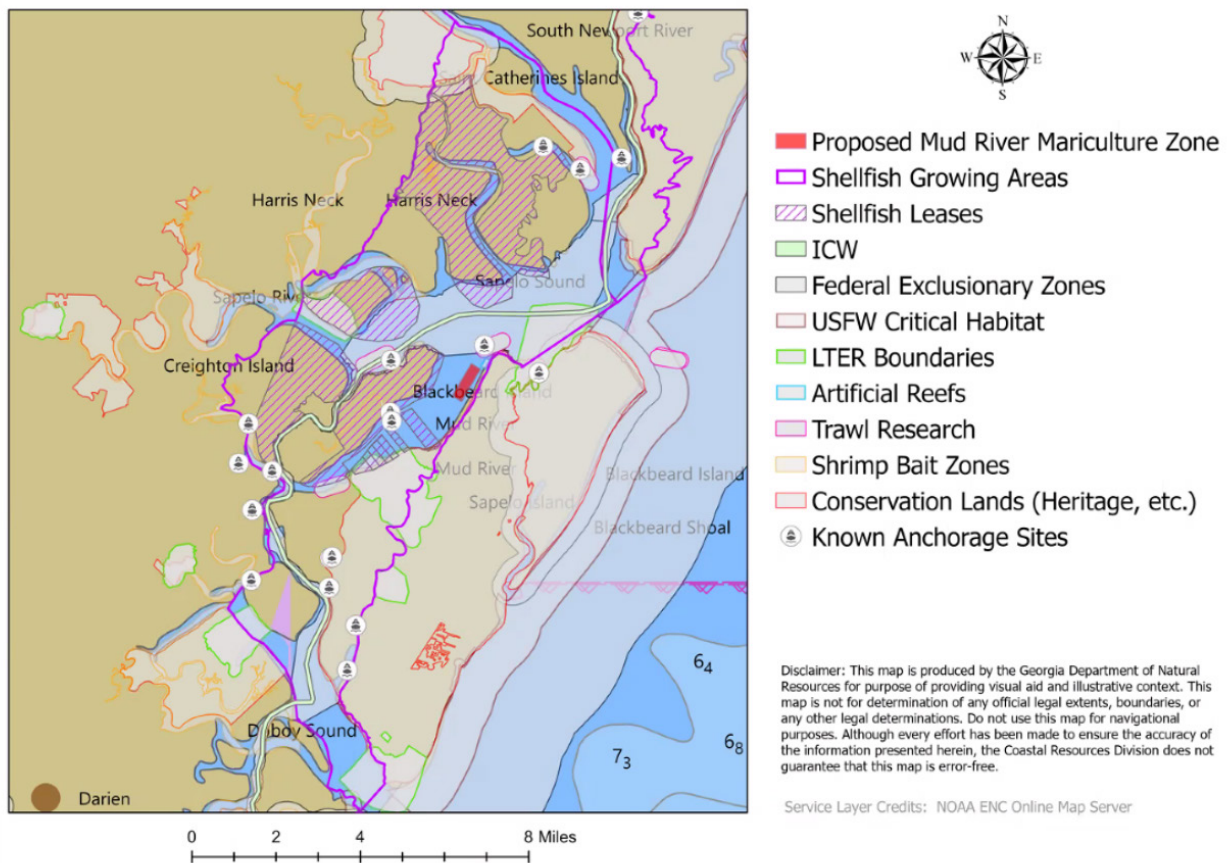
⁷⁸ For the most up-to-date information on lotteries and leases, see *Commercial Shellfish Harvest*, Coastal Resources Division, <https://coastalgadnr.org/commercialshellfishharvest> (Last Visited June 29, 2021).

APPENDIX B – EXISTING SUBTIDAL LEASE SITES

1. Mud River, McIntosh County

The image below shows the McIntosh County Mud River Mariculture Zone, zoomed out to a county-wide view to show the siting factors CRD must take into consideration when locating subtidal shellfish leases.



McIntosh Exclusionary Areas for Subtidal Leases

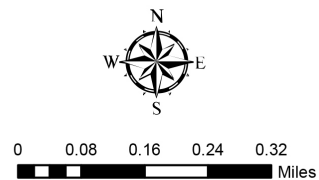


The image below shows three ten-acre lease sites located within the Mariculture Zone. CRD issued three of these sites for lease on June 1, 2021.

MUD RIVER SUBTIDAL LEASES



 Mud River Mariculture Zone
 Mud River Subtidal Leases



PRODUCED BY:
GA DEPT. OF NATURAL RESOURCES:
COASTAL RESOURCES DIVISION
SHELLFISH AND WATER QUALITY PROGRAM



APPENDIX C – SHELLFISH HARVEST CHECKLISTS

SHELLFISH WILD HARVEST CHECKLIST

Obtain a Water Bottom for a Shellfish Harvest Area

- State Intertidal water bottom
- Leases are advertised by CRD and awarded via a competitive bid process.
- Private Intertidal water bottom
- Must be inside an Approved Growing Area.
- Applicant must prove valid ownership and/or lease contract.

Contacts: CRD (912)264-7218

For more information and view current leasing opportunities,
visit: <https://coastalgadnr.org/commercialshellfishharvest>

Start GA Dept. of Agriculture Certification Process

*You must be certified by the GADOA before harvesting
any product from your Harvest Area *

GADOA Contact: Krissa Jones (404) 657-4801

For more information, visit: <http://www.agr.georgia.gov/seafood.aspx>

Obtain CRD Commercial Fishing License with Shellfish Endorsement

Contacts: CRD (912)264-7218

For more information, visit: <https://coastalgadnr.org/CommercialFishing>

Obtain CRD Master Harvester Permit (MHP)

Contacts: CRD (912)264-7218

An MHP application will be provided by the department
once a valid Harvest Area has been identified.

Submit a Cultch Deployment Form (CDF)

Contacts: CRD (912)264-7218

For a digital copy of a CDF, visit: <https://coastalgadnr.org/commercialshellfishharvest>

Obtain US Army Corps of Engineers Permit

Contact: Skye Stockel (912)652-5690, Skye.H.Stockel@usace.army.mil

For more information, visit:

<https://www.sas.usace.army.mil/Missions/Regulatory/Permitting/>

*Before placing Cultch in the waters of the state,
all State and Federal Permits must be obtained*

SHELLFISH MARICULTURE CHECKLIST

Obtain a Water Bottom for a Shellfish Harvest Area

State Intertidal water bottom

- Leases are advertised by CRD and awarded via a competitive bid process.

Private Intertidal water bottom

- Must be inside an Approved Growing Area.
- Applicant must prove valid ownership and/or lease contract.

Subtidal water bottoms

- Leases are advertised and offered via a lottery by CRD.

For more information and view current leasing opportunities, visit <https://coastalgadnr.org/commercialshellfishharvest>

Start GA Dept. of Agriculture Certification Process

*You must be certified by the GADOA before harvesting product from your Harvest Area *

GADOA Contact: Krissa Jones (404) 657-4801

For more information, visit: <http://www.agr.georgia.gov/seafood.aspx>

Obtain CRD Commercial Fishing License with Shellfish Endorsement

Contacts: CRD (912)264-7218

For more information, visit: <https://coastalgadnr.org/CommercialFishing>

Obtain CRD Master Harvester Permit

Contacts: CRD (912)264-7218

An MHP application will be provided by the department once an applicable Harvest Area has been identified.

Apply for Shellfish Mariculture Permit

Contacts: CRD (912)264-7218

For a digital copy of an SMP, visit: <https://coastalgadnr.org/commercialshellfishharvest>

Obtain US Army Corps of Engineers Permit

Contact: Skye Stockel (912)652-5690, Skye.H.Stockel@usace.army.mil For more information, visit:

<https://www.sas.usace.army.mil/Missions/Regulatory/Permitting/>

Receive GA DNR Shellfish Mariculture Permit

- Cage Permit authorized with SMP if necessary (oyster gear only).

* Before placing gear in the waters of the state, all State and Federal Permits must be obtained*

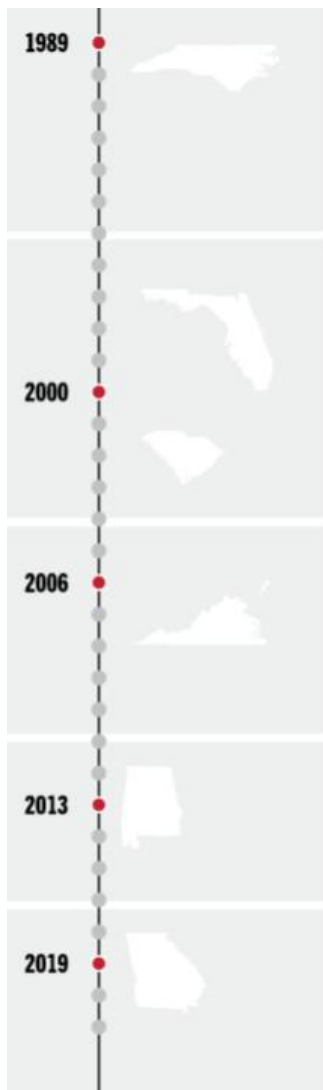
APPENDIX D – OYSTER SEED PLANTING AND PRODUCTION REQUIREMENTS

Subtidal Lease Minimum Planting Requirements:

Once all authorizations have been obtained, subtidal State Harvest Areas will be held to a minimum planting requirement of 10,000 oyster seed per acre within the first year. Planting requirements will increase by 10,000 per acre each year until the maximum of 50,000 oyster seed per acre is reached and maintained for the remainder of the lease contract. Renewed lease contracts will maintain the 50,000 seed per acre per year requirement for the remainder of the lease contract and upon lease renewal. See the table below for an example of planting requirements on leases of different sizes.

YEAR	PLANTING REQUIREMENT (PER ACRE)	5 ACRE LEASE REQUIREMENT	10 ACRE LEASE REQUIREMENT
1	10,000	50,000 (~50 cages)	100,000 (~100 cages)
2	20,000	100,000 (~100 cages)	200,000 (~200 cages)
3	30,000	150,000 (~150 cages)	300,000 (~300 cages)
4	40,000	200,000 (~200 cages)	400,000 (~400 cages)
5+	50,000	250,000 (~250 cages)	500,000 (~500 cages)

APPENDIX E – OTHER STATE PROGRAMS AT A GLANCE



State	Enacted / Amended Oyster Laws	State-funded hatchery	Select Own Sites?	Lease Selection Process	Year-round harvest?
NC	1989 / 2009 / 2019	Yes	Yes	First come, First serve	Yes
FL	2000 / 2005	Yes	Yes	First come, First serve	Yes
SC	2000 / 2017	No (private only)	Yes	First come, First serve*	Yes, with permit
VA	2006	Yes	Yes	First come, First serve	Yes
AL	2009 / 2013	Yes	Yes	Competitive Bidding**	Yes
GA	2019	Yes	No	Competitive Bidding (Intertidal), Lottery (Subtidal)	Yes, with DNR approval (subtidal only)

2019 Oyster Landings

