



Growing Oysters in Georgia: An Overview of the Legal Framework

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December 2018



In the early 20th century, Georgia led the nation in producing oysters with more than eight million pounds harvested annually.¹ Harvested primarily for the canning industry, Georgia oysters were valued for their “intensely salty” taste tinged with lemongrass.² Until the 1930s, Georgia led the country with 13 canneries, but production plummeted in the 1950s. Oysters were then primarily sold as a canned product until the mid-1960s when Georgia’s last oyster shucking house closed its doors.³ By the 1970s, less than 100,000 pounds were landed annually.⁴

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1. 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 (hereinafter “Bliss & Walker, *Reducing Harvest Size*”); Sea Grant, National Oceanic and Atmospheric Administration; Emily Woodward, *Sustainable Aquaculture: Georgia Sea Grant Opens State’s First Oyster Hatchery*, GEORGIA SEA GRANT (Oct. 27, 2016).
 2. Mary Landers, *Georgia Perfects the Lonely Oyster*, BLUFFTON TODAY (Jan. 20, 2016).
 3. *A Blueprint for Oyster Aquaculture in Georgia 2017-2022*, GEORGIA SEA GRANT, GA. DEP’T OF NATURAL RES., & GA. DEP’T OF AGRIC. [hereinafter “Georgia Blueprint”].
 4. Bliss & Walker, *Reducing Harvest Size*, *supra* note 1, at 1.

This case study was prepared by Danielle Goshen, Georgia Sea Grant Law Fellow and third-year law student at the University of Georgia School of Law, and Shana Jones, Director of the Georgia Sea Grant Law Program and Associate Public Service Faculty at the Carl Vinson Institute of Government at the University of Georgia using federal funds under award number NA17OAR4170239, “Overcoming Impediments to Shellfish Aquaculture,” funded by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. For more information about the project, please visit <http://nsglc.olemiss.edu/projects/shellfish-aquaculture>. The statements, findings, conclusions, and recommendations are those of the authors and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

Georgia’s oyster stock reached 28,467 pounds in 2017.⁵ While over-harvesting and fisheries mismanagement were the primary causes of the oyster industry’s decline in Georgia, market demand for canned oysters also changed.⁶ Today, Georgia’s marshes have recovered from many of the impacts of overharvesting, enabling the productive growth of oysters and other shellfish. While this is good news, adapting to market changes will be essential if the oyster industry is to revitalize. Tastes have shifted from canned oysters to oysters on the half-shell, and “single oysters” required for half-shell production do not grow naturally in Georgia. Unlike oysters that grow in subtidal environments such as in the Chesapeake Bay, Delaware Bay, or off of the Gulf Coast, Georgia oyster beds are found in the intertidal zone, which is the area between the local high tide and low tide marks, where they grow in muddy clumps with brittle shells having sharp edges.⁷ While clumped oysters work well for oyster roasts and canning, the high-end restaurant market demands single oysters to sell on the half-shell.

Fortunately, marine aquaculture techniques – “mariculture” or “oyster farming” – can allow single oysters to be grown in Georgia. Aquaculture techniques suitable for Georgia’s environment require “off-bottom” gear that allows the oysters to be grown and held above the sea bottom. Such gear often involves mesh containers such as baskets, cages, or bags that float, are suspended in the water column, or rest “off bottom.” Using these techniques provides protection from predators, inhibits the oysters from becoming buried in sediment, and improves growth rates due to increased availability of food.⁸ Single oysters with thicker shells suitable for the half-shell market can be grown successfully using such oyster farming techniques.

This case study provides a brief overview of Georgia’s regulatory framework relating to the commercial harvesting of shellfish in order to provide the context for the opportunities and challenges facing the state as it works to grow Georgia oyster aquaculture. The case study focuses on some of the key challenges and opportunities facing stakeholders and policymakers, concluding with possible ways to promote best practices and economic development of the oyster industry.

5. NAT’L OCEANIC AND ATMOSPHERIC ADMIN., NMFS Landing Query, Georgia 2017.

6. Landers, *supra* note 2.

7. This occurs because of high natural recruitment rates and competition for habitat. Shumaway, *Shellfish Aquaculture and the Environment* (2011).

8. *Off-Bottom Oyster Farming*, ALABAMA COOPERATIVE EXTENSION SYSTEM.

HARVESTING AND SELLING OYSTERS IN GEORGIA: THE PERMITTING FRAMEWORK

Like other states around the nation, the Georgia General Assembly has enacted laws prescribing how, when, and where people can harvest shellfish. The Georgia Department of Natural Resources, Coastal Resources Division (CRD), manages oysters in accordance with these laws, designating what waters are appropriate for oyster harvesting and permitting qualified persons to harvest in these waters. The Department of Agriculture manages sanitation requirements related to commercial handling and shipping of shellfish.

Several requirements must be met for a person to harvest oysters for commercial purposes in Georgia: 1) the harvesting must occur in “approved shellfish waters”; 2) the harvester must receive certification from the Department of Agriculture to handle shellfish; 3) the harvester must have a right to the oysters in the oyster beds, usually in the form of a public or private lease; 4) the harvester must obtain a Master Collecting permit from CRD; and 5) the harvester must have a series of licenses and certifications related to operating vessels and selling shellfish.

1. Must Be Approved Shellfish Waters

The tidewater in which the person wants to harvest must qualify as “approved shellfish waters.”⁹ For public health reasons, shellfish waters must meet the requirements of the National Shellfish Sanitation Program (NSSP) before they are designated as approved.¹⁰ The NSSP operates as a national and state cooperative aimed at ensuring “the safety of shellfish for human consumption by preventing harvest from contaminated growing waters.”¹¹ The NSSP offers guidance through a Model Ordinance in which “states have agreed to enforce the Model Ordinance as the requirements which are minimally necessary for the sanitary control of molluscan shellfish.”

9. GA. CODE ANN. §§ 27-4-193(b), 27-4-195(a).

10. Oysters and other shellfish are filter feeders that are susceptible to developing high concentrations of harmful microorganisms when growing in poor water conditions. U.S. FOOD AND FEDERAL DRUG ADMINISTRATION, *National Shellfish Sanitation Program: Guide for the Control of Molluscan Shellfish* (2015). High concentrations of harmful microorganisms has been linked to many harmful shellfish-borne infectious diseases. *Id.* GA. COMP. R. & REGS. 391-3-6-.03(6)(c)(iii)(2) (Current with amendments available through February 14, 2017); *Guide for the Control of Molluscan Shellfish, 2017 Revision*, U.S. FOOD & DRUG ADMINISTRATION.

11. *Id.*

At the state level, Georgia has largely adopted the provisions detailed in the Model Ordinance.¹² These requirements encompass two primary areas: the water quality in which the oysters grow and the manner in which they are handled and shipped. In Georgia, the CRD is responsible for water quality requirements. The Department of Agriculture’s Seafood Safety Office is the primary authority regarding sanitation of shellfish in handling and transportation.

Water Quality Requirements

To prevent the harms created by shellfish growing in unclean water, the NSSP Model Ordinance requires that states conduct sanitary surveys monitoring the quality of water in growing areas.¹³ In Georgia, based on the results of the sanitary survey, growing areas are classified as either “approved” or “prohibited.”¹⁴ CRD is responsible for completing these sanitation surveys and classifying growing areas.¹⁵ In total, CRD monitors the water quality for fecal coliform bacteria in 82 stations that encompass both recreational and commercial lease areas within growing areas.¹⁶ After classifying a growing area, CRD has the authority to enforce this determination as Georgia

12. GA. CODE ANN. § 27-4-197 (providing that both the Department of Agriculture (“DOA”) and the Department of Natural Resources (“DNR”) are responsible for implementing Georgia’s Shellfish Sanitation Program in a way that is “sufficient to be certified by the United States Food and Drug Administration).

13. *Id.* A sanitation survey includes: “(1) identification and evaluation of the pollution sources that may affect the areas, (2) an evaluation of the meteorological factors, (3) an evaluation of hydrographic factors that may affect distribution of pollutants throughout the area, and (4) an assessment of water quality.” *Id.*

14. Each of the classifications have different implications for harvesters attempting to use the growing area. An area is given an approved classification when the area is free from “unacceptable concentrations” of harmful substances. These areas are also considered open to harvesting, unless an emergency situation, like a hurricane, causes a temporary closing of the area. Oysters or other shellfish taken from these areas may be sold directly without any other requirements. Conversely, an area is classified as restricted when there is an indication of a “limited degree of pollution” in the water quality. This classification is often placed on areas that are subject to fluctuations in water pollution. With the fluctuations in pollution, oysters or shellfish taken from these areas are often required to go through additional treatment before being deemed safe for human consumption. This category requires additional monitoring by the state to ensure that the harmful effects from these areas are avoided. In between these categories, conditionally approved and conditionally restricted areas are optional classifications available to the state. These options exist to classify areas that are subject to “intermittent microbiological pollution.” These classifications offer a more flexible approach for the state to restrict access to areas without creating a year-round overly burdensome classification. Finally, the last area of classification is the prohibited areas. These areas are considered closed to harvesting. Growing areas can be classified as prohibited in three ways. First, an area can be prohibited if the sanitary survey produced results that found excessive concentrations of harmful substances in the water. Secondly, a growing area is classified as prohibited if the state fails to adequately update survey requirements on a timely basis. Without updated information, the presumption is that the area is prohibited and closed until further surveys are completed. A third type of prohibited growing area is actually mandated by the ordinance. The ordinance mandates that an area between a sewage treatment plant or other waste discharge of public health significance and a growing area should be labeled as a prohibited area.

15. GA. CODE ANN. § 27-4-195 (providing that “[i]t shall be unlawful to take shellfish from any of the salt waters of this state except at such times and places as the commissioner [of DNR] may establish” and that “the commissioner is authorized to open or close [any area] for the purpose of taking shellfish at any time...”); GA. COMP. R. & REGS. 391-3-6-.03.

16. GA. DEP’T OF NATURAL RES. DIV., *Shellfish Water Quality and Monitoring*.

law makes it “unlawful for any person to take or possess shellfish from unauthorized locations and during unauthorized periods of taking.”¹⁷ Violations constitute a “misdemeanor of a high and aggravated nature.”¹⁸ Additionally, CRD, as discussed in more detail below, has the authority to deny Master Collecting or Picker’s permits to anyone convicted three times or more within two years of applying for a permit.

2. Must Have Certification from the Department of Agriculture to Handle Shellfish

The Model Ordinance also provides a variety of specific regulations regarding the shipping and handling of shellfish that are directly relevant to sanitation concerns. These regulations are aimed at preventing the contamination that occurs “during activities involved in harvesting, processing, distribution, or shipping” of shellfish. While the document provides too many very detailed provisions to adequately describe here, important provisions include detailed guidance for the proper use of storage bins and the temperature at which shellfish can be transported; sanitation certification requirements for dealers; and sanitation requirements for each stage in the process of preparing shellfish for sale, including detailed instructions for maintaining sanitation during shucking and packing, repacking of shucked shellfish, shellstock shipping, reshipping, and depuration. In Georgia, the Department of Agriculture is the primary authority regarding sanitation of shellfish in transportation, processing, and handling.¹⁹

Certification from the Department of Agriculture is required to “ship or possess commercial quantities of shellfish.”²⁰ Certification requirements are developed according to NSSP guidelines. Specifically, certification is required for “every person who operates a plant where shellfish are handled, stored, shucked, packed, repacked, shipped, reshipped and/or sold in any manner....”²¹ The regulation does not apply to the preparation and/or sale of shellfish in kitchens or restaurants.

17. GA. CODE ANN. § 27-4-190.

18. *Id.* § 27-4-201.

19. *Id.* § 27-4-190; GA. COMP. R. & REGS. 40-7-12-.02 (providing the Department of Agriculture the authority to grant Georgia Shellfish Sanitation Certificates, which is given to a “person who operates a plant where shellfish are handled, stored, shucked, packed, repacked, shipped, reshipped and/or sold in any manner shall possess an unrevoked certificate of satisfactory compliance”); GA. COMP. R. & REGS. 40-7-12-.18 (authority to inspect and then revoke permits for violations of compliance with sanitation requirements); GA. CODE ANN. § 27-4-197 (providing the Department of Agriculture with the express powers to regulate sanitation quality used in processing and shipping shellfish); GA. CODE ANN. § 27-4-197 (providing the Department of Agriculture with powers to promote shellfish sanitation); GA. COMP. R. & REGS. 40.7.12.19 (adopting the NSSP model ordinance).

20. GA. CODE ANN. § 27-4-197.

21. GA. COMP. R. & REGS. 40-7-12-.02.

3. Must Have Right to Oysters in Water Beds

In order to harvest shellfish for commercial purposes, a person must have the right to harvest the oysters in the water beds and be able to validate this right. Rights to the oysters in Georgia's beds either belong to the state or are private property. An oyster harvester may acquire these rights through land ownership or through a lease.

Rights to Harvest Oysters: Land Ownership

Under Georgia law, ownership of exclusive rights to harvest is based the location of the oyster in relation to:

- the relevant water's status as "navigable," and
- the high and low water tide lines.

Presently Georgia's oyster industry is focused on harvesting oysters in the intertidal areas, also known as the foreshore. However, there is great interest in oyster aquaculture practices that would take place in deeper water below the low tide line, and thus ownership of both the foreshore and consistently inundated areas below the low tide line are relevant.²²

In Georgia, a navigable water is one that "is capable of transporting at mean low tide boats loaded with freight in the regular course of trade."²³ Importantly, this definition is more limited than the federal definition promulgated by the U.S. Army Corps of Engineers, which includes wetlands as well as waters traditionally understood as navigable.²⁴ For the purposes of oyster rights in Georgia, there are two types of navigable waters to consider: navigable tidewaters and navigable streams. In *navigable tidewaters*, the State owns the water bottoms and the foreshore up to the high water mark.²⁵ Private land owners own the uplands above the high water mark. For *coastal navigable streams*, the State owns the title to the land and the water bottoms up to the low water mark.²⁶

22. State ownership of the water bottoms is premised on a common law legal premise known as the public trust doctrine, which essentially means that the state owns title to the lands to be held in trust for the public good. In situations where an adjacent property can show a chain of title stretching back to a grant from the English monarch prior to the creation of the state, often called a "kings grant" or a "crown grant," they can claim title to the water bottoms discussed here and the oysters growing from them.

23. GA. CODE ANN. §§ 44-8-5(a) and 44-8-7(a).

24. See 33 C.F.R. § 329.4 ("Navigable waters of the United States are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity.")

25. See *Johnson v. State*, 114 Ga. 790 (1902)

26. GA. CODE ANN. § 44-8-5(b)

Private landowners own the uplands down to the low water mark. When the waters are “non-navigable,” the State does not have ownership rights. Private landowners own “non-navigable” water bottoms in Georgia. They also own the rights to harvest oysters in these areas.

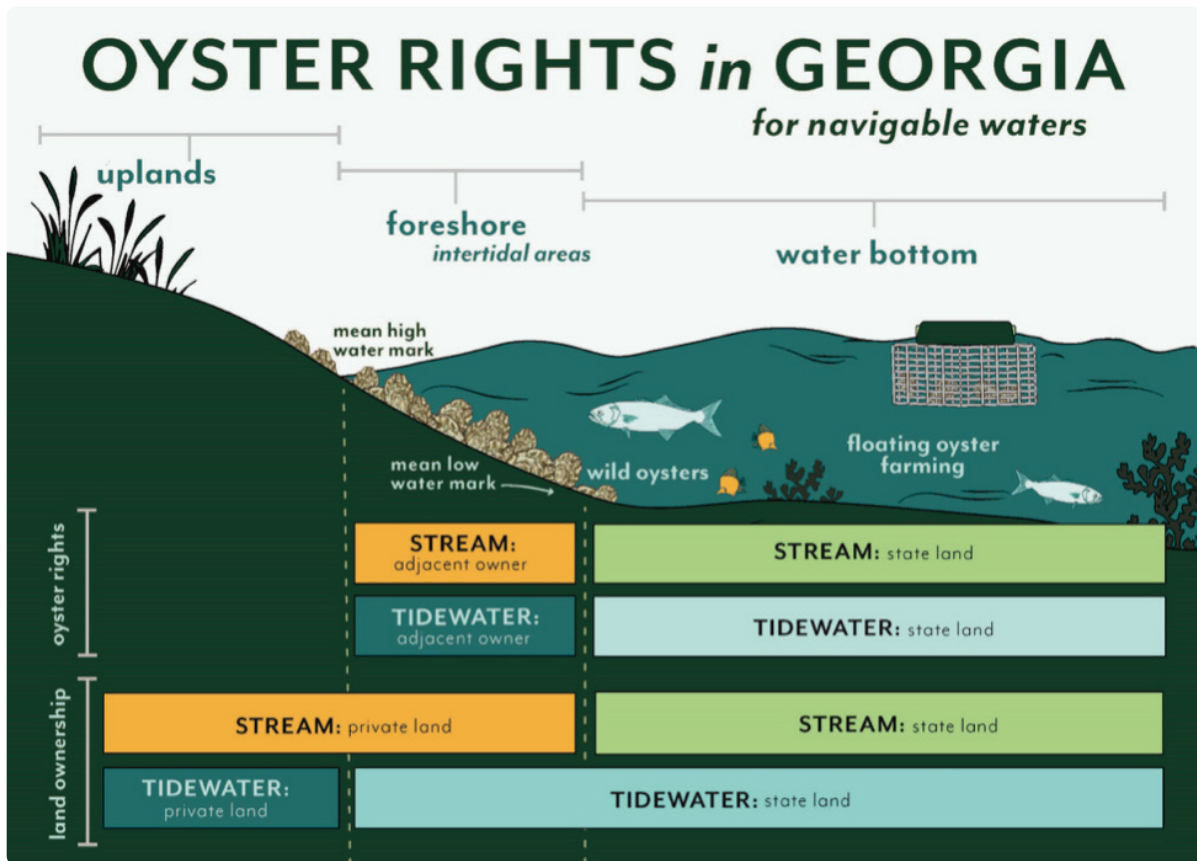


Figure 1: Oyster Rights in Georgia

Under common law, property owners adjacent to navigable tidewaters and navigable streams would not have rights to harvest oysters beyond their tidal boundaries – these rights would belong to the State. In 1902, however, the Georgia General Assembly conveyed to private property owners adjacent to navigable waters the exclusive right to harvest oysters, clams, and other shellfish to the low-water mark.²⁷ In *State v. Ashmore*, the Supreme Court of Georgia explained that the intention of the boundary was to promote the oyster industry, specifically the planting and cultivation of oysters and clams, and the exclusive right to harvest those crops as well as oysters and clams growing there naturally.²⁸ As such, in Georgia, rights to the oysters found in the foreshore beds are owned by the adjacent upland property owner.²⁹

27. *State v. Ashmore*, 236 Ga. 401, 409–10 (1976).

28. *Id.* at 412. Again, the exclusive right is for recreational purposes. Commercial activity would still require a Master Collecting Permit.

29. GA. CODE ANN. § 44-8-7(b).

While all of this sounds complicated, the bottom line is that, in navigable waters, the private property owner owns the right to the oysters down to the low water mark. The State owns the right to the oysters beyond this point. Property owners adjacent to oyster beds in nonnavigable waters own both the water bottoms and have exclusive rights to oysters and other shellfish located in these waters.

Type of Water	State Land Ownership	Private Land Ownership	Foreshore Oyster Rights	Waterbottom Oyster Rights
Navigable Tidewater	Water bottoms up to the high water mark.	Uplands above the high water mark.	Belong to the adjacent owner.	Belong to the state.
Nonnavigable Tidewater	None	All of the upland sand waterbottoms.	Belong to the adjacent owner.	Belong to the adjacent owner.
Navigable Stream	Water bottoms up to the low water mark.	Uplands down to the high water mark.	Belong to the adjacent owner.	Belong to the state.
Nonnavigable Stream	None	All of the upland sand waterbottoms.	Belong to the adjacent owner.	Belong to the adjacent owner.

Rights to Harvest Oysters: Private and State Leases

A commercial oyster harvester must either own land to have sufficient rights in adjacent waters to harvest them or they can acquire rights to oysters through a private lease (acquired from a private landowner) or a state lease (acquired from CRD).³⁰ Notably, in oyster aquaculture context, it is helpful to understand different factors may make one lease preferable over the other. For example, it is possible that growers may choose to farm oysters in non-navigable waters to avoid having to acquire an additional permit from the U.S. Army Corps of Engineers, which would be required if they farmed in navigable waters.³¹ On the other hand, some growers may see benefits to farming in navigable waters because of easier access to gear or other reasons.

30. *Georgia Shellfish Aquaculture*, UNIV. OF GA. There is no statutory leasing process for a lease to privately owned land; however, a signed and notarized copy of the lease is required if the leaseholder seeks a Master Collector’s permit. Such leases are filed with the superior court in the county or county were the lease is located. Private lessees with Master Collector permit must comply with permit requirements under Georgia law. Failure to do so is a violation of the law, and will result in the revocation of the Master Collector’s permit and will prevent the permittee from obtaining a permit the following season. See GA. CODE ANN. §§ 27-4-190(a)(1); 27-4-190(c); and 27-4-196; *Ga. Shellfish Aquaculture*, UNIV. OF GA.

31. *Decision Document Nationwide Permit 48*, U.S. ARMY CORPS OF ENGINEERS.

State and Private Leases: Approximate Breakdown of Lease Areas in Acres³²

Lease Type	Leased Acres	Available Acres	Total
<i>Private</i>	18,800	0	18,800
<i>State</i>	4,160	4,040	8,200
<i>Combined</i>	22,960	4,040	27,000

This section focuses on the process for state leases as they represent acreage in Georgia that is still available for commercial harvesting. A state lease is a lease of any state shellfish bed, which includes all shellfish beds in navigable tidewaters except for those in the “foreshore” adjacent to a private landowner. Any person hoping to obtain a state lease must apply in writing to CRD or participate in a bidding process for a lease that has been approved by CRD.³³ The application must include the name and legal residence of the applicant, a NOAA chart indicating the area desired to be leased, the names and addresses of adjacent landowners as recorded on county tax maps and verification of such information in such form as the CRD may prescribe, the proposed plans for managing the resources, and such other information as the CRD may prescribe.

After receiving the application CRD will ascertain the general nature, character, surroundings, and resource value of the area the applicant is seeking to lease.³⁴ If CRD determines that the area is suitable for leasing and such a lease would be in the best interests of the state, it offers the lease through public competitive bidding process. To bid on the lease, bidders must submit to CRD sealed bids that are accompanied by a refundable certified check, cashier’s check, or money order for the total annual amount of the submitted bid, which will be applied towards the lease if the bidder wins. Additionally, each sealed bid must be accompanied by a detailed management plan for working the shellfish beds.³⁵

32. Prepared in consultation with Thomas Bliss, Marine Extension and Georgia Sea Grant.

33. GA. CODE ANN. § 27-4-198(a).

34. *Id.* § 27-4-198(b).

35. *Id.* The CRD publishes once per week for two consecutive weeks in the legal organ of the county or counties where the lease is located an advertisement of an invitation to bid. The CRD publishes once per week for two consecutive weeks in the legal organ of the county or counties where the lease is located an advertisement of an invitation to bid. The advertisement must contain relative information about the area being leased and the specifics of the bidding process. Prior to advertisement, the CRD prepares a proposed form of lease and appropriate instructions, which are available to prospective bidders under conditions prescribed by CRD. The lease form contains provisions regarding the term of the lease, the method of taking oysters, the time and place for payment for the lease, the minimum replanting or management requirements of oysters to be harvested, the placement and type of signs to mark the site as a leased area, and any other terms that CRD deems necessary.

CRD opens all bids for state leases to the public, and the agency may choose the bid and bidder it considers most advantageous to the state.³⁶ Under the law, CRD is granted considerable discretion when choosing which bid and bidder is most advantageous. According to CRD, “[i]ssuance of a lease depends on the availability of permitted areas, the experience and knowledge of shellfish aquaculture demonstrated by the applicant and the merits of the applicant’s shellfish management plan.”³⁷ Additionally, CRD has “the right to reject any or all bids and bidders and the right to waiver formalities in bidding.”³⁸ The agency, however, *must* give preference to residents over nonresidents who have submitted equal bids.³⁹ If the lease is approved, a copy of the lease *and* a Master Collecting permit will be issued to the winning bidder authorizing the harvest of shellfish.⁴⁰

The lessee must post at the site a sign that clearly identifies the areas leased pursuant to Georgia law.⁴¹ The lessee must have a copy of the lease recorded within 30 days of the execution of the lease by the clerk of the superior court of the county or counties in which the leased area is located.⁴²

Any Master Collector or Picker taking oysters from beds leased from the state must return to the oyster beds the shells taken from such beds in such amounts as are specified in the lease agreement.⁴³ Failure to do so will result in the revocation of the Master Collecting permit and will prevent the permittee from obtaining a permit the following season.⁴⁴ Additionally, leases may be terminated if the Master Collector fails to maintain his on-site storage and processing facilities, fails to adequately supervise his pickers, or fails to maintain his shellfish lease area as required by state law.”⁴⁵

36. GA. CODE ANN. § 27-4-198(c).

37. *Commercial Shellfish Harvest*, GA. DEP’T OF NATURAL RES. DIV., COASTAL RES. DIV.

38. GA. CODE ANN. § 27-4-198(c).

39. *Id.*

40. *Georgia Shellfish Aquaculture*, UNIV. OF GA.

41. GA. CODE ANN. § 27-4-198(d).

42. *Id.*

43. *Id.* § 27-4-196(c).

44. *Id.* § 27-4-190(a), (c).

45. *Commercial Shellfish Harvest*, GA. DEP’T OF NATURAL RES. DIV., COASTAL RES. DIV.

Who	Type of Ownership and Rights	Harvesting for Commercial Purposes
State of Georgia	The State has fee simple title to the foreshore and beds of navigable tidewaters. ⁴⁶ The State possesses the exclusive right to oysters, clams, and other shellfish unless landowners are adjacent to nonnavigable or navigable waters	Persons wishing to harvest shellfish must acquire a state lease and a Master Collecting permit.
Owner of land adjacent to navigable tidewaters -- “Ashmore Owners.”	The State has fee simple title to the foreshore and beds of navigable tidewaters. ⁴⁷	<p>Owner possesses the exclusive right to shellfish to the low-water mark of the bed of the water, according to <i>State v. Ashmore</i>.⁴⁸</p> <p>Owner does not need a state lease but must acquire a Master Collecting Permit.</p> <p>Non-owners wishing to harvest these shellfish must acquire a private lease from the owner and a Master Collecting Permit.</p>
Owner of land adjacent to nonnavigable tidewaters.	The owner has fee simple title to the nonnavigable waters.	<p>The owner has the exclusive right to the shellfish in the nonnavigable tidewaters.⁴⁹</p> <p>Owners do not need a state lease but must acquire a Master Collecting permit.</p> <p>Non-owners wishing to harvest these shellfish must acquire a private lease from the owner and a Master Collecting permit.⁵⁰</p>

46. *State v. Ashmore*, 236 Ga. at 413. Navigable tidewater is defined by statute as “any tidewater, the sea or any inlet thereof, or any other bed of water where the tide regularly ebbs and flows which is in fact used for the purposes of navigation or is capable of transporting at mean low tide boats loaded with freight in the regular course of trade.” GA. CODE ANN. § 44-8-7(a).

47. *Id.*

48. *Id.*

49. *Id.* § 44-8-6. If the water is the dividing line between two parcels of land, each owner’s boundary (and rights) extends to the main thread of channel of the water. This right can be conveyed to holders of leases from such persons.

50. *Id.* § 27-4-190(a)(1).

4. Must Obtain Master Collecting Permit

A person seeking to harvest shellfish for commercial purposes must qualify for and obtain a Master Collecting permit from CRD, which authorizes the harvest and specifies its terms.⁵¹ As noted above, a person must be certified to handle shellfish by the Department of Agriculture before receiving a Master Collecting permit.⁵² Under some readings of the statute, if a person has sought and received permission from CRD to engage in oyster aquaculture or “mariculture,” a certification to handle shellfish from the Department of Agriculture may not be required in order to acquire a Master Collecting permit. Certification, however, is always required to sell farmed oysters commercially.⁵³

CRD issues Master Collecting permits at no charge to the applicant. CRD only issues Master Collecting Permits to individuals or companies who have the exclusive right to harvest oysters from a particular area. Again, an individual or company can have such a right by holding title to the tidewater bed, by possessing the exclusive rights to the oysters in a tidewater bed, or by holding a lease from a person who has such rights. If the permittee’s right to harvest oysters is terminated, e.g., the lease is revoked, the permit is void.⁵⁴ CRD issues permits annually.⁵⁵

A Master Collector’s right to harvest oysters is limited. A Master Collecting permit only allows the taking or possessing of oysters from authorized locations and during authorized periods time. In Georgia, permittees can only take oysters between the hours of one-half hour before sunrise and one-half hour after sunset.⁵⁶ Regarding location, permittees cannot take any quantity of oysters for commercial purpose from public recreation harvest areas.⁵⁷ Additionally, and as discussed above, permittees are limited to harvesting in areas where they have the exclusive right to harvest, and that have been approved by CRD.⁵⁸

51. *Id.* § 27-4-190(a)(1).

52. *Id.* § 27-4-190.

53. Specifically, Georgia law provides that the “department may issue permission to uncertified firms to take and possess shellfish for mariculture purposes. Such permission may be issued upon such conditions as the department determines are in accordance with current, sound principles of wildlife research and management.” *Id.* § 27-4-197.

54. *Id.* § 27-4-190.

55. *Id.*

56. GA. CODE ANN. § 27-4-190(b).

57. GA. CODE ANN. § 27-4-190(d).

58. GA. CODE ANN. § 27-4-190(a)(1).

Furthermore, Georgia law limits what equipment Master Collectors can use to harvest oysters. Without CRD's authorization, it is unlawful for a Master Collector to take or possess for commercial purposes oysters from the salt waters of the state except by hand or hand-held implement.⁵⁹ CRD can authorize the use of other equipment if it determines that conditions are "in accordance with current, sound principles of wildlife research and management."⁶⁰ Other equipment includes, but is not limited to, rock dredges, escalator dredges, hydraulic dredges, mechanical tongs, patent tongs, and any power drawn or driven device.⁶¹ Prior to using other equipment, the Master Collector must obtain written approval from CRD, which the permittee must carry on his person while taking oysters.⁶² The Master Collector must always meet the conditions of CRD's authorization.⁶³

Any employee of a Master Collector who will harvest oysters from permitted waters must have a Picker's Permit, which authorizes such harvesting.⁶⁴ Master Collectors must request Picker's Permits, in writing, from the CRD.⁶⁵ CRD will not issue, not reissue, and revoke the Master Collecting and Picker's Permits if the Master Collector's right to harvest oysters is terminated, he or she fails to fulfill his or her conservation-related obligations, or he or she repeatedly violates the laws governing shellfish harvesting.⁶⁶

59. *Id.* § 27-4-192(a).

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.* Master Collectors also have certain obligations to return oyster shell ("clutch") to the oyster beds harvested, depending on whether the beds are leased from the state or privately. A permittee taking oysters from beds *leased from the state* must return to the beds the shells from such beds in such amounts as are specified in the lease agreement with the state. *Id.* § 27-4-196(c). Master Collectors gathering oysters for commercial purposes from beds other than those leased from the state to do one of the following each year: "(1) distribute upon areas designated by the department at least 33 1/3 percent by volume of oyster shells taken by permittee or taken under authorization by permittee during the immediately preceding harvest season; (2) transplant at least such amount by volume of oysters from unapproved growing areas in accordance with the requirements of th[e] article; or (3) distribute or transplant at least such amount by volume of culch material. *Id.* § 27-4-196(c). If an applicant has violated any of these provisions in the past year, CRD cannot issue Master Collector Permit to the applicant. *Id.* § 27-4-196(a)(2) ("Clutch material' means that material which is approved by the department and which is conducive to larval oyster attachment.").

64. *Id.*

65. *Id.*

66. *Id.* §§ 27-4-190(a)(1), (c), 27-4-196(c).

5. Other Permits, Licenses, and Certifications

In addition to the leases and permits discussed above, several certificates and licenses are required to sell and harvest shellfish for commercial purposes in Georgia. In addition to having a Georgia Shellfish Sanitation Certificate, which was noted above, a Georgia Wholesale Fish Dealer License, a Food Sales Establishment License, a Georgia commercial fishing license, and a Georgia Commercial fishing vessel license are required.⁶⁷ Pickers must have a commercial fishing license and, if the Picker uses a boat, a valid personal commercial fishing boat license.⁶⁸

Finally, it must be emphasized that the requirements discussed throughout this case study are those that pertain directly to oyster or other shellfish aquaculture. Depending on the location of shellfish, additional state and federal laws may be implicated. For instance, the U.S. Army Corps of Engineers regulates the nation's navigable waters, and thus aquaculture operations that take place below the low water mark in a federally-defined navigable water must receive a permit from the Corps of Engineers.⁶⁹ In addition many aquaculture operations will also implicate Georgia's Coastal Marshland Protection Act, which will require an additional level of review from the Georgia DNR.⁷⁰

67. *Commercial Shellfish Harvest*, *supra* note 45; GA. CODE ANN. § 27-4-190(a)(1).

68. GA. CODE ANN. § 27-4-190(a)(1).

69. Section 10 of the Rivers and Harbors Act (33 U.S.C. 403); Section 404 Clean Water Act (33 U.S.C. 1344).

70. GA. CODE ANN. § 12-5-280 et seq. The Coastal Marshland Protection Act regulates areas along tidally influenced waters within 5.6 feet above and below the mean tide line.

**HARVESTING AND SELLING OYSTERS IN GEORGIA:
TOWARDS A FRAMEWORK THAT PROMOTES BEST PRACTICES AND ECONOMIC DEVELOPMENT**

Georgia’s law and regulations currently reflect in large part an era of wild harvesting of oysters. Georgia has the opportunity to build upon this framework to promote oyster aquaculture, and, indeed, stakeholders have been involved in a public-private partnership to expand Georgia’s seafood industry through oyster farming.⁷¹ While these stakeholders have identified a series of goals and action steps to strengthen the foundation of the Georgia shellfish industry, this section focuses on some of the regulatory challenges and opportunities facing stakeholders and policymakers.

1. Standardized Guidance for Oyster Aquaculture

Expanding oyster farming in Georgia will require a framework that takes oyster aquaculture directly into account. Current law and regulations reflect an era when wild harvesting of oysters was the dominant practice. While oyster aquaculture is permitted by statute, the law is vague about what practices are and are not allowed. CRD may allow firms to “take and possess shellfish for mariculture purposes” if such purposes are “in accordance with current, sound principles of wildlife research and management.”⁷² This provision gives CRD great deference to approve – or not approve – oyster aquaculture activity, but it provides little guidance to oyster farmers about what kind of aquaculture techniques and activities are permissible. Currently, CRD is allowing on a case-by-case basis some aquaculture techniques to be used by some commercial shellfish growers. The uncertainty inherent in a case-by-case process makes taking the economic risk to pursue oyster aquaculture difficult for oyster farmers.

In addition, while CRD has approved techniques that work well for clam growers, techniques that work best for oyster farmers have not been approved. Clams, unlike oysters, grow directly in the sediment, and soft mesh bags or netting is laid directly on the bottom to control predators. Sapelo Sea Farms, for example, has been given permission to use bag “grow out” techniques for clams that lie directly on bottom and have no vertical relief.⁷³ While such an approach works for clams, it does not work well for oyster farming.

71. Georgia Blueprint, *supra* note 3.

72. GA. CODE ANN. § 27-4-197.

73. This technique allows the shellfish farmer to use “seed” that’s grown in a hatchery, which are then planted in mesh bags and deposited on tidewater beds where the shellfish are left to grow for 4-6 months.

In the past, CRD, at their discretion, has allowed shellfish growers to use limited amount of aquaculture gear that is similar in size to crabbing gear by giving permission for growers to hold bags “off bottom” at the height equal to or less than the height of a crab trap in the intertidal area on commercial leases.⁷⁴ What this means for the oyster industry is that harvesters have been allowed to collect or grow oysters using oyster aquaculture techniques from the one meter column from the bed, if approved in advance by CRD. Gear must be placed on the bottom of approved leases, and may only go up 24-36 inches from the bottom.⁷⁵ Growing oysters “off bottom” requires pulling the cages from the bottom of the tidewater bed to shake the sediment off the oysters at least once every one to two weeks, a process that is extremely labor intensive. Gear that floats on top of the water, or is suspended in the water column, has not yet been approved. Such gear is more conducive to growing single oysters for the half-shell market. It also reduces the amount of labor involved.

Certainly, approving floating gear may raise important and difficult issues for CRD, as floating gear brings the challenges of user conflicts and exclusive use of navigable waterways. The purpose of keeping approvals essentially “off bottom” is likely to protect against interference with navigation, avoid having to address vandalism or theft, and/or preserve viewsheds. These are critical concerns. A possible next step may be to develop a set of best practices from neighboring states that have enacted regulations allowing more options for oyster growers while balancing other crucial interests. South Carolina, for example, has developed a permitting process specific to commercial mariculture operations.⁷⁶ Under these regulations, the grower may specify the gear they wish to use, although there appears to be different levels of likelihood of obtaining a permit for different types of gear used and some issues appear to have arisen as a result.⁷⁷ In addition, those seeking to utilize floating cages must qualify for a permit from the U.S. Army Corps of Engineers. South Carolina and the Corps of Engineers have created a Joint Shellfish Mariculture Application to facilitate this process.⁷⁸ North Carolina and Florida also have

74. See Email from Thomas Bliss, Director of the University of Georgia’s Marine Extension Shellfish Research Lab (Dec. 4, 2017 4:02 PM).

75. Kelly Simmons, *Hatching a Solution: Engineering Students Help Georgia Oyster Farmers*, UNIVERSITY OF GEORGIA, COLLEGE OF ENGINEERING.

76. S.C. CODE ANN. § 50-5-900.

77. See S.C. DEP’T OF HEALTH AND ENVTL. CONTROL REGULATION § 61-47.O.6 (“Operators of shellfish mariculture permit areas permitted by South Carolina Department of Natural resources shall provide the Department with a written operational plan that shall include ... (c) the types and locations of any structures, including rafts, pens, cages, nets, tanks, ponds, or floats utilized in the aquaculture operation.”). See S.C. DEP’T OF NATURAL RES., *Checklist for Prospective Mariculture Permittees*.

78. See S.C. DEP’T OF NATURAL RES., OFFICE OF COASTAL RES. MGMT. AND U.S. ARMY CORPS OF ENG’R., *Joint Shellfish Mariculture Application for South Carolina*.

developed permitting programs for commercial shellfish aquaculture. Understanding what has and has not worked in these states could inform any future development of a standardized shellfish aquaculture process for Georgia. “Buffer” regions to preserve viewsheds may be warranted, for example. Education and outreach with property owners would almost certainly be needed. In addition, given that CRD would be given additional responsibilities if such a process was developed, an analysis of the staff expertise and costs required to manage aquaculture permitting, costs related to managing and protecting the aquaculture operations, and appropriate permit fees should also be considered.

2. Leases: Streamlining the Process and Expanding Opportunities

Utilizing standardized lease requirements and expanding lease opportunities and acreage also may be another way for Georgia to streamline its process and support the development of oyster aquaculture. In Georgia, a standard lease advertisement and a standard water bottoms contract for all successful bidders are utilized, although there is nevertheless some confusion by some growers who find the process time-consuming. A possible next step may be to develop a set of best practices from neighboring states regarding their approach to the lease process.

In addition, because wild harvesting has been the focus in Georgia, leasing opportunities are limited in at least two different ways. First, Georgia does not have a water column lease option. For example, in addition to providing bottom leases, North Carolina also offers water column leases to allow for oyster aquaculture gear such as floating gear, racks and cages.⁷⁹ Applicants for water column leases must either possess a bottom lease already or submit an application for a bottom and water column lease at the same time.

Second, the acreage size of leases in Georgia are not adapted to farming oysters. Oyster aquaculture requires much smaller areas than wild harvesting. Currently, lease areas in Georgia are large, ranging from 170-4,500 acres. Most of these acres are not usable, as they may be broken by salt marshes, tidal creeks and mudflats. Nevertheless, fees are based upon the entire leased area, even if much of it is unusable for oyster aquaculture. Oyster aquaculture, on the other hand, requires much smaller areas because techniques allow for much more efficient cultivation. Again, analyzing how neighboring states have adapted their leases and lease areas to accommodate oyster aquaculture would be a useful first step to understanding what may or may not be possible in Georgia.

79. 15A N.C. ADMIN. CODE 03O.0201; N.C. GEN. STAT. §§ 113-201.1-201.2.

Finally, because crown grants present a barrier to expanding leasing opportunities and acreage in the state, additional research may be needed to assess the extent of the problem and its likely impact on areas suitable for oyster aquaculture. Again, state leases are likely necessary for most oyster aquaculture in Georgia because the state holds the bottom lands of its coastal waters in trust for the public benefit. Due to the fact, however, that the state of Georgia assumed title to these lands from the British Crown, private property owners who can trace their land title back to an original land grant from the King of England can claim private ownership of the water bottoms on their property. These areas – often referred to as “kings grants” or “crown grants” – are then private property (though still subject to navigation on the water over them), and they are not subject to public access or public leasing.⁸⁰ This was common law in Georgia for many years until it was codified under O.C.G.A. § 52-1-2, the Protection of Tidewaters Act.⁸¹ Because the existence of crown grants could make determining a property in interest in tidewater difficult to prove, uncertainty often exists about whether the state can approve an area proposed for a state lease. More research is needed to determine the feasibility of identifying crown grants in order to assist the state with identifying areas appropriate for state leases. Ultimately, having a map of areas suitable for leasing would be a tremendous tool for both the state and oyster farmers. North Carolina, South Carolina, and Florida have such maps.⁸² Giving growers clear information about which areas are suitable for leasing would improve efficiencies and streamline the current process.⁸³ Of course, developing such a map requires significant geographic information system (GIS) capacity – both to create the map and maintain it accurately over time.

80. *Id.* (“The State of Georgia continues to hold title to the beds of all tidewaters within the state, except where title in a private party can be traced to a valid Crown or state grant which explicitly conveyed the beds of such tidewaters.”).

81. GA. CODE ANN. § 52-1-2 (“The General Assembly finds and declares that the State of Georgia became the owner of the beds of all tidewaters within the jurisdiction of the State of Georgia as successor to the Crown of England and by the common law. The State of Georgia continues to hold title to the beds of all tidewaters within the state, except where title in a private party can be traced to a valid Crown or state grant which explicitly conveyed the beds of such tidewaters.”). *See* Black v. Floyd, 280 Ga. 525, 526 (2006) (“... the [S]tate [of Georgia] owns the [tide]water[s] bottoms up to the high water mark,” unless, pursuant to OCGA § 52-1-2, a private party can trace his or her title back to an explicit conveyance thereof by a valid Crown or state grant.”).

82. *Shellfish Sanitation Maps by County*, N.C. DIV. OF MARINE FISHERIES, <http://portal.ncdenr.org/web/mf/shellfish-closure-maps>; *State Shellfish Grounds 2018-2019 Season Commercial Harvesting*, S.C. DEP’T OF NATURAL RES., <http://dnr.sc.gov/marine/shellfish/pdf/shellfishcommercial.pdf>; Shellfish Harvesting Areas, FL. FISH AND WILDLIFE CONSERVATION COMM’N, http://atoll.floridamarine.org/indevelopment/shellfish_pub/.

83. *See Georgia Shellfish Aquaculture*, *supra* note 41. Maryland has an online citing tool that could serve as a model. *See* [The Maryland Shellfish Aquaculture Citing Tool](#).

Conclusion

Great potential exists for Georgia's oyster aquaculture industry. As this brief overview of Georgia's regulatory framework relating to the commercial harvesting of shellfish indicates, however, both opportunities and challenges face the state as it strives to grow Georgia oyster aquaculture. The following next steps may be useful to promote best practices and economic development of the oyster industry.

Standardized Guidance for Oyster Aquaculture

Expanding oyster farming in Georgia will require a framework that takes oyster aquaculture directly into account. Current law and regulations contemplate wild harvesting of oysters primarily, while gear most suitable for growing single oysters has not yet been approved in a standardized way. Uniform guidance to oyster farmers about what kind of aquaculture techniques and activities are permissible is needed in order to produce regulatory and economic certainty. Developing a set of best practices and lessons learned from neighboring states that have enacted regulations or adopted guidance allowing more options for oyster growers while balancing other crucial interests such as navigation, theft, and viewsheds has the potential to productively inform any future development of a standardized shellfish aquaculture process for Georgia.

Leases: Streamlining the Process and Expanding Opportunities

Utilizing standardized lease requirements and expanding lease opportunities and acreage also may be another way for Georgia to streamline its process and support the development of oyster aquaculture. In addition to providing bottom leases, Georgia could consider also providing water column leases, as is done in North Carolina. Oyster aquaculture requires much smaller areas than wild harvesting, yet lease areas in Georgia are large, ranging from 170-4,500 acres. Analyzing how neighboring states have adapted their leases and lease areas to accommodate oyster aquaculture would be a useful first step to understanding what may or may not be possible in Georgia. Because crown grants could be a barrier to expanding leasing opportunities and acreage in the state, additional research may be needed to assess the extent of the problem and its likely impact on areas suitable for oyster aquaculture. Ultimately, having an online map of areas suitable for leasing would be a tremendous tool for both the state and oyster farmers.

Giving growers clear information about which areas are suitable for leasing would improve efficiencies and streamline the current process.

Understanding the State Resources Needed to Support Oyster Aquaculture Development

While developing oyster aquaculture is an economic development activity likely to benefit the state and its citizens, doing so is likely to increase the State's responsibilities – particularly at the Coastal Resources Division and Department of Agriculture – to manage the oyster fishery and ensure seafood safety as well. An analysis of the staff expertise and costs required to manage aquaculture permitting, costs related to managing and protecting aquaculture operations, and appropriate permit fees should also be considered. It is important to remember that, unlike most commercial fisheries, shellfish commodities are heavily regulated to ensure that a safe product is produced and sold to the public because, in many cases, it is consumed raw. The state agencies involved in shellfish regulation in Georgia are audited annually by the Food and Drug Administration. A successful shellfish industry therefore ultimately hinges on the capacity for it to be properly regulated and that all programs are implemented as required.