Fiscal Impact Analysis of Proposed Rule Amendments to Shellfish Leasing Regulations

Rule Amendments: 15A NCAC 03K .0111

15A NCAC 03O .0203, .0205-.0211

Name of Commission: N.C. Marine Fisheries Commission

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Impact Summary: State government: Yes

Local government: No Federal government: No Substantial impact: No

Authority:

North Carolina General Statutes

§ 76-40. Navigable waters; certain practices regulated.

§ 113-134. Rules.

§ 113-169.1. Permits for gear, equipment, and other specialized activities authorized.

§ 113-182. Regulation of fishing and fisheries.

§ 113-201. Legislative findings and declaration of policy; authority of Marine Fisheries Commission.

§ 113-202. New and renewal leases for shellfish cultivation; termination of leases issued prior to January 1, 1966.

§ 113-202.1. Water column leases for aquaculture.

§ 113-202.2. Water column leases for aquaculture for perpetual franchises.

§ 113-205. Registration of grants in navigable waters; exercise of private fishery rights.

§ 113-206. Chart of grants, leases and fishery rights; overlapping leases and rights; contest or condemnation of claims; damages for taking of property.

§ 143B-289.52. Marine Fisheries Commission - powers and duties.

Necessity: General Statute 150B-21.3A requires state agencies to review their existing rules every 10 years to determine which rules are still necessary, and to either readopt or repeal each rule as appropriate. Eight rules in 15A NCAC 03O .0200 are proposed for readoption pursuant to this requirement. Rule 15A NCAC 03K .0111 is also proposed for repeal through readoption. Additionally, Session Law 2019-37 was passed with the explicit goal of providing increased support to the state's shellfish aquaculture industry. Following recently approved rules related to this, these rules are proposed with conforming changes as well as additional changes to continue supporting the efficiency of the state's shellfish lease program and production.

I. Summary

Proposed rule amendments to shellfish aquaculture leasing aim to further address recommendations laid out in Session Law 2019-37 and the subsequent Shellfish Aquaculture User Conflict Study (Appendix III). Most proposed changes do not incur additional impact to the state, as they simply are conforming rule language to three shellfish lease rules approved by the Marine Fisheries Commission (MFC) in February and the Rules Review Commission (RRC) in April 2021. Proposed changes with anticipated impacts seek to streamline and shorten processes for shellfish lease applications, shellfish lease application grievances by the public, production reporting requirements, and shellfish lease transfers and subleases. Overall, these proposed changes will incur state-level benefits from time and efficiency improvements, as well as improvements to overall shellfish lease productivity across the state. Conversely, a small cost to the state is incurred by the proposed shellfish production report that will be developed and disseminated to leaseholders by the Division of Marine Fisheries (DMF) annually, as well as the new shellfish lease transfer and sublease criteria. The total combination of costs and benefits to the state cannot be accurately quantified but is not significant. No impacts to enforcement are expected as well.

II. Introduction and Purpose of Rule Changes

The North Carolina General Assembly passed Session Law (S.L.) 2019-37 effective July 1, 2019. The General Assembly noted that the purpose of the bill is "to provide further support to the shellfish aquaculture industry in the State of North Carolina." Section 9 of the bill requires the North Carolina Department of Environmental Quality (NCDEQ), DMF and MFC to study how to reduce user conflict related to shellfish cultivation leases, and to adopt rules and reform internal operating procedures consistent with the findings of the study.

The increase in coastal populations coupled with the growth of the shellfish aquaculture industry, particularly with respect to utilizing floating gear, has led to user conflicts regarding the use of coastal and estuarine waters. User conflicts are generally described as disagreements that arise between multiple users of areas leased for private shellfish cultivation purposes, commonly referred to as shellfish aquaculture or shellfish leases. DMF and MFC address topics pertinent to user conflicts in the shellfish aquaculture industry in the Shellfish Aquaculture User Conflict Study. The study also discusses the existing regulatory framework governing shellfish leases in North Carolina (Appendix III). Recommendations for amending shellfish lease rules to begin addressing user conflict issues were made in the study. These recommendations were translated into the proposed rule amendments discussed here and cover a broad suite of approaches in order to simultaneously maintain a strong focus on shellfish aquaculture production, while also reducing user conflict between growers and the surrounding community.

Of the eleven rules relating to shellfish lease regulations in 15A NCAC 03O .0200, three of these have already been amended and approved. These rules are 15A NCAC 03O .0201, .0202, and .0204, and relate to increasing setback limits from developed shorelines for new shellfish leases, limiting the allowable number of corners for demarcating shellfish leases to simplify polygon shape, setting new criteria for shellfish lease stakes and signage to alleviate navigation concerns, and initiating a new leaseholder training program that emphasizes user conflict reduction strategies. This leaves eight additional rules in 15A NCAC 03O .0200 relating to shellfish lease regulations that still require amendment and readoption.

Many of the changes proposed for these eight rules will not incur any additional impact to the state, as they are intended to conform rule language with practice and regulations already approved in 15A NCAC 03O .0201, .0202, and .0204. As these three rules approved a suite of changes to shellfish lease management, including applications and production requirements, these additional eight rules require amendments to conform with these ongoing changes. Additionally, a number of technical or clarifying changes are proposed throughout these rules that also incur no impact.

However, additional changes are proposed across these rules to help improve shellfish lease management and reduce user conflict that may incur additional impacts to the state. All of the proposed changes with expected impacts are summarized below, while all changes with no expected impact will not be elaborated on further.

Firstly, 15A NCAC 03O .0203 proposes a new 30-day requirement for shellfish lease applicants to amend insufficient applications. In the past, when applicants received feedback from DMF staff regarding minimum requirements for a lease application and inconsistencies with applicable standards to be addressed, there was no discrete timeline to amend the application. By proposing a 30-day re-application window, the goal is to increase the state's efficiency of the resource by decreasing the time potential lease area remains vacant, either by the applicant or future interested applicants.

Next, 15A NCAC 03O .0206 proposes changes to how grievances over shellfish lease applications can be filed for individuals beyond the applicant, e.g., adjacent riparian owners. This new process implements the newly-formed Shellfish Cultivation Lease Review Committee (SCLRC), which was created through Section 6 of S.L. 2019-37, and is supported by the corresponding DMF standard operating procedures that were then reviewed and approved by NCMFC counsel. Presumably, the law changes assure members of the public still have ample access to protest and provide comment on shellfish lease applications while doing so through a more organized and efficient channel, implemented by the proposed rule amendments and supported by the DMF procedures.

15A NCAC 03O .0207 proposes a requirement for shellfish leaseholders to submit an annual production report to DMF to document the total amount of material purchased, planted, and harvested each year to ensure accordance with the new production requirements that have already been approved by the N.C. General Assembly. DMF will provide the reporting forms annually to each leaseholder. The production requirements have already been evaluated for impact, so the actual report generation is the only additional impact incurred by this proposed change, which is intended to help DMF staff monitor leases more efficiently to meet the demands of the newly-approved production criteria.

The final rule with anticipated impacts is 15A NCAC 03O .0208, which proposes new, more stringent criteria for shellfish lease transfer and subleases. Broadly, the proposed changes ensure that the potential transferee or sublessee has the correct training and meets other requirements for having a shellfish lease, just as each original applicant must meet these requirements at the onset. This new 'pre-screen' approach to transfers and subleases ensures the person is eligible before the assignment happens, instead of after the fact, as is currently the case. Ultimately, this is also

intended to increase efficiency in shellfish lease administration, as well as improve shellfish production outcomes across all leases.

During the shellfish lease rules review process, 15A NCAC 03K .0111 "Permits to use mechanical methods for shellfish on shellfish leases or franchises" was reviewed to determine where to put an exemption for davits used to retrieve aquaculture gear from a shellfish lease or franchise (as allowed by S.L. 2015-241, Section 14.10C(b)). In reviewing, it was determined it would be more appropriate to repeal 03K .0111 and move similar requirements to 03O .0211 because they only apply to shellfish leases. In other words, the only stakeholders that are affected by what is currently in 03K .0111 are shellfish leaseholders. The purpose of the proposed changes is to clearly lay out the gears that you can and cannot use on a shellfish lease, in addition to the requirement to obtain the mechanical methods permit for most circumstances, consolidated in one rule. With this, the proposed changes do not impact regulations of mechanical harvest of shellfish on lease sites, but rather move rule language to a more logical location in the N.C. Administrative Code, and no meaningful impacts will be incurred.

Lastly, as all of the proposed changed with anticipated impacts discussed above do not affect operations for Marine Patrol staff, there is no expected impact to enforcement.

III. Fiscal Analysis

Although the proposed rules for readoption carry a number of substantive changes, the large majority of these changes do not incur any impact to the state, as they either are changes proposed to match shellfish lease rules that have already received MFC and RRC approval, or technical changes with no impact. However, there are a variety of proposed changes that further advance the recommendations of the Shellfish Aquaculture User Conflict Study, with the aim to continue adding efficiency to the state's shellfish lease program for all stakeholders' benefit. These proposed changes incur a small flow of costs and benefits that will be examined below. In all, the combined impact of the benefits and costs of these proposed changes cannot be accurately quantified, but overall in combination is not expected to be significant. Again, there are no expected impacts to enforcement from the proposed rule changes.

a. Summary of Potential Economic Benefits

Based on the proposed changed above, the largest impact felt at the state level will be benefits associated with a more efficient administrative process for shellfish leases and leaseholders in the state. In all, benefits can be summarized into two categories: time-cost benefits by reducing administrative burden on the DMF, and benefits associated with more efficient and productive use of potential shellfish lease sites.

In terms of the time-cost benefits, the proposed changes across all four rules with anticipated impacts will likely incur this type of benefit. The new 30-day reapplication period proposed in 15A NCAC 03O .0203 reduces time waiting for applicants to address inconsistencies noted by the DMF, and also eliminates the need for DMF staff to spend time tracking down a reapplication status. The codification of the SCLRC in 15A NCAC 03O .0206 would also make a more organized and efficient process for stakeholder input on shellfish lease applications, reducing DMF time burden. For 15A NCAC 03O .0207, the proposed production report requirements would increase efficiency in DMF staff's ability to monitor each lease for production without

necessitating site visits or individual requests for information. Lastly, the new 'pre-screening' approach to shellfish lease transfers and subleases in 15A NCAC 03O .0208 will decrease the time needed for DMF staff to review transfers and subleases. While upfront time is required to review transfer and sublease applications, this process will assure unsuitable candidates do not inherit a shellfish lease, reducing the time burden staff has to assure that all leases are properly managed upon transfer or sublease. In all, these four proposed rule changes are expected to decrease the time burden on DMF staff working with shellfish leases, creating a benefit to the state. However, this total impact cannot be quantified, but is not expected to be significant.

Additionally, two rules (15A NCAC 03O .0203 and .0208) also incur benefits in relation to more productive outcomes from shellfish lease sites across the state. As 15A NCAC 03O .0203 proposes a requirement for applicants to address inconsistencies noted by the DMF within 30 days of notification, approvals or denials of a shellfish lease site will be more efficient. This will allow suitable lease site spaces to be occupied and exploited more quickly, leading to overall greater production from shellfish leases in the state. In line with this, the new pre-approval process for shellfish lease transfers and subleases in 15A NCAC 03O .0208 should also lead to better production outcomes across shellfish lease sites. By assuring shellfish lease transfer or sublease candidates have the appropriate training and other requirements, the DMF is managing a much more stable flow of productivity out of shellfish lease sites, which should yield a benefit to the state. Again, the productivity benefits from these two proposed rule changes cannot be quantified and are not significant, even when considered in combination with the time-value benefits discussed above.

b. Summary of Potential Economic Costs

These proposed changes are expected to incur very low costs to the state, with only two proposed rules generating potential impacts at this time. Specifically, in the new production reporting requirements for 15A NCAC 03O .0207, the DMF is responsible for preparing and providing reporting forms annually to each leaseholder. Because of this, the state will incur a low annual cost in the form of DMF staff time to prepare and disseminate this form, as well as the hard costs required to generate the form. While this total cost cannot be accurately quantified, DMF reports 381 active shellfish leases in the state¹, and therefore the total cost is not expected to be significant. Additionally, the new reporting requirement may incur an additional time burden on leaseholders, which could impact overall lease production. The added time to report the additional data requested by the Division could result in slightly less effort in producing shellfish from leases, leading to lower overall output and a cost to the state. However, this added time is expected to be low, and this added cost is not significant.

Lastly, while the proposed changes to shellfish lease transfers and subleases in 15A NCAC 03O .0208 should primarily incur benefits to the state, there may also be small costs as well. By putting stricter criteria on transfers and subleases, it may take more time to find appropriate candidates, potentially leaving periods where leases go unused and unproductive. Additionally, potential transfer and sublease candidates may also need to incur personal costs to undertake necessary trainings to meet criteria. This is not only a time cost that affects lease productivity, but also a hard cost that limits additional spending and investment on a shellfish lease. In total,

¹ http://portal.ncdenr.org/web/mf/shellfish-lease-franchise-programs

while these combination of costs are not significant, they demonstrate how proposed rules may also impact overall shellfish lease production and affect the state moving forward.

In summary, the proposed rule changes seek to conform the remaining shellfish lease rules with recently approved rules, along with additional proposed changes to increase the efficiency of the state's shellfish lease industry overall. After consideration of the proposed changes, there are likely both costs and benefits incurred at the state level, though the total combination is not significant.

Appendix II Proposed Rule Changes:

15A NCAC 03K .0111 is proposed for repeal through readoption as follows:

15A NCAC 03K .0111 PERMITS TO USE MECHANICAL METHODS FOR SHELLFISH ON SHELLFISH LEASES OR FRANCHISES

(a) Permits to Use Mechanical Methods for Shellfish on Shellfish Leases or Franchises shall be issued in compliance with the general rules governing all permits in 15A NCAC 03O .0500. The procedures and requirements for obtaining permits are found in 15A NCAC 03O .0501.

(b) It is unlawful to harvest shellfish by the use of mechanical methods from shellfish leases or franchises without first obtaining a Permit to Use Mechanical Methods for Shellfish on Shellfish Leases or Franchises.

History Note: Authority G.S. 113-134; 113-169.1; 113-182; 143B-289.52;

Eff. May 1, 2015;

Repealed Eff. (Pending legislative review of 15A NCAC 03O .0211).

15A NCAC 03O .0203 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0203 SHELLFISH LEASE APPLICATION PROCESSING

- (a) Upon-After acceptance of a completed application, shellfish lease application as set forth in Rule .0202 of this Section, the proposed shellfish lease area shall be inspected by agents of the Division. Division of Marine Fisheries. Proposed shellfish lease areas inconsistent with applicable standards contained or referenced in 15A NCAC 3O .0201 Rule .0201 of this Section shall result in the return of applications the application for amendment to remove the inconsistencies. If the boundaries of the proposed shellfish lease area are modified, the stakes identifying such areas shall be relocated accordingly by the applicant. applicant or applicants. The failure of the applicant or applicants to amend applications the application or modify the shellfish lease area identification, when required, within 30 days of notification shall result in denial of such applications. the application.
- (b) If the initial or amended <u>shellfish</u> lease application is deemed consistent with all applicable requirements, the Secretary or <u>his-their</u> designee shall notify the applicant and publish notices of intention to lease in accordance with the standards in G.S. 113-202(f).
- (c) The Secretary shall consider the <u>shellfish</u> lease application, the Division's proposed lease area analysis, and public comments, and may in <u>his-their</u> discretion lease or decline to lease the proposed lease area or any part thereof. Special conditions may be imposed so that <u>shellfish</u> leases may be issued <u>which-that</u> would otherwise be denied. Should an applicant decide not to accept any special condition imposed on the <u>shellfish</u> lease by the Secretary, the application shall be considered denied.
- (d) Upon After approval of leases a shellfish lease by the Secretary, the applicant or applicants shall mark the shellfish bottom leases lease in accordance with Rule .0204 of this Section within 30 days of approval.15A NCAC 3O .0204(a)(1), water column leases in accordance with 15A NCAC 3O .0204(a)(2), and shall within 90 days submit to the Division acceptable surveys of the areas approved for leasing except that a water column lease which entirely covers a shellfish bottom lease or franchise with an accepted survey on file does not require another survey. Such surveys shall be made at the expense of applicants and must meet the following standards:
 - (1) Surveys and maps shall meet all the requirements of 21 NCAC 56.1600, Standards of Practice for Land Surveying in North Carolina, which is hereby incorporated by reference including subsequent amendments and editions. This material is available for inspection and copies may be obtained from the Marine Fisheries Division, Marine Fisheries Building, 3441 Arendell St., P.O. Box 769, Morehead City, North Carolina 28557, at no cost.

	Worthead City, North Caronna 2000, at no cost.
(2)	Maps shall bear the certificate:
	"I certify that this map was (drawn by me) (drawn under my
	supervision) from (an actual survey made by me) (an actual survey made under my supervision);
	that the error of closure as calculated by latitudes and departures is 1:, that the area
	is acres. Witness my hand and seal this day of AD
	<u>"</u>

Surveyor or Engineer

- (3) The phrase "other appropriate natural monuments or landmarks" in 21 NCAC 56 .1604(e)(9) shall include bridges, roads, highways, intersections, publicly maintained aids to navigation, houses and other permanent buildings, radio, telephone, TV, and water towers; docks; piers, and bulkheads; but does not include stakes marking the boundaries of adjoining leases, points of marsh, junctions of streams, or other landmarks which are particularly subject to change through natural processes, storms, or the effect of man.
- (4) A written description of the survey suitable for official documents shall be provided with the survey.
- (5) Locations of all corner markers in latitude and longitude shall be provided with the survey and presented in an eight digit format. The relative accuracy of the corner marker locations shall be equal to or less than two meters. Information on the method of measurement, make and model of equipment, and coordinate system used to determine the latitude and longitude shall be included.
- (e) Proposed shellfish bottom lease areas remain public bottom until a lease contract has been executed by the Secretary.
- (f) Proposed <u>shellfish</u> water column lease areas superjacent to <u>shellfish</u>-bottom leases and <u>recognized perpetual</u> franchises remain public water until a lease contract has been executed by the Secretary.

History Note: Authority G.S. 113-134; 113-182; 113-201; 113-202; 113-202.1; 113-202.2; 113-206; 143B-289.52; Eff. January 1, 1991; Amended Eff. October 1, 2008; March 1, 1994; September 1, 1991;

15A NCAC 03O .0205 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0205 SHELLFISH LEASE RENEWAL

- (a) <u>Lease-Shellfish lease</u> renewal applications shall be provided to <u>lessees-lease holders by the Division of Marine</u> Fisheries as follows:
 - (1) For for a shellfish bottom leases, lease, a renewal application shall be provided in January of the year of expiration.
 - (2) For for a shellfish water column leases, lease, a renewal application shall be provided at least 90 days prior to the expiration dates.
- (b) <u>Lease-A shellfish lease</u> renewal <u>applications-application</u> shall be accompanied by <u>management plans meeting a Shellfish Lease Management Plan that meets</u> the requirements of 15A NCAC 03O .0202(b). <u>Rule .0202 of this Section.</u>

 The non-refundable filing fee set forth in G.S. 113-202(j) shall accompany each renewal application for <u>a shellfish bottom leases.</u> lease.
- (c) A survey for renewal leases shall be required at the applicant's expense when the Division determines that the area leased to the renewal applicant is inconsistent with the survey on file.
- (c) To be eligible to renew a shellfish lease, persons holding any acres under a shellfish lease or franchise shall meet the requirements established in Rules .0201 and .0204 of this Section and 15A NCAC 03O .0503(a).
- (d) When If it is determined, after due notice to the lessee, shellfish lease holder and after opportunity for the lessee lease holder to be heard, that the lessee lease holder has not complied with the requirements of this Section or that the lease as issued is inconsistent with this Section, the Secretary may decline to renew, at the end of the current terms, any shellfish bottom or water column lease. The lessee shellfish lease holder may appeal the Secretary's decision by initiating filing a petition for a contested case as outlined in 15A NCAC 03P .0102.under G.S. 150B-23.
- (e) Pursuant to G.S. 113-202(a)(6), the Secretary is not authorized to recommend approval of approve renewal of a shellfish lease in an area closed to shellfishing by reason of pollution. designated as polluted by a proclamation issued by the Fisheries Director. Excluded from this requirement are shellfish leases located in conditionally approved waters that have been temporarily closed when the conditions of the written management plan are not met as described in 15A NCAC 18A .0905. Shellfish leases partially closed due to pollution must shall be amended to exclude the area closed to shellfishing shellfish harvest prior to renewal. For purposes of lease renewal determinations, an area shall be considered closed to shellfish harvest by reason of pollution when the area has been classified by the State Health Director as prohibited or has been closed for more than 50 percent of the days during the final four years prior to renewal except shellfish leases in areas which have been closed for more than 50 percent of the days during the final four years prior to renewal and continue to meet established production requirements by sale of shellfish through relay periods or other depuration methods shall not be considered closed due to pollution for renewal purposes.
- (f) If the Secretary declines to renew a <u>shellfish</u> lease that has been determined to be inconsistent with the standards of this Section, the Secretary, with the agreement of the <u>lessee</u>, <u>lease holder</u>, may issue a renewal lease for all or part of the area previously leased to the <u>lessee</u> <u>lease holder</u> that contains conditions necessary to conform the renewal lease to the requirements of this Section for new leases.

History Note: Authority G.S. 113-134; <u>113-182;</u> 113-201; 113-202; 113-202.1; 113-202.2; <u>113-206;</u> 143B-289.52;

Eff. January 1, 1991;

Amended Eff. September 1, 2005; May 1, 1997; March 1, 1995; March 1, 1994; October 1, 1992;

September 1, 1991;

15A NCAC 03O .0206 is proposed for readoption with substantive changes as follows:

(a) Should any person object to the granting of any initial or renewal lease, he has the right to protest its issuance prior to the granting of the lease by the Secretary. The protestant may file a sworn statement of protest with the Division stating the grounds for protest. The Secretary shall notify both the prospective lessee and the protestant upon receipt of a protest, and shall conduct such investigation as he deems necessary, and shall notify both parties of the outcome of his investigation. Protestants or applicants receiving an adverse recommendation on the lease application from the Secretary may appeal this decision as outlined in G.S. 113 202(g).

(b)(a) Any member of the public shall be allowed an opportunity to comment on any shellfish lease application during the public comment period and subsequent public hearing at which the lease application is being considered by the Secretary. Secretary as set forth in G.S. 113-202.

(b) Procedures for how an applicant or a person other than the applicant who is aggrieved may proceed with a contested case based on dissatisfaction of the Secretary's decision on a shellfish lease application are provided in G.S. 113-202(g). Additionally, a person other than the applicant who is aggrieved may submit a request for a determination of the appropriateness of a contested case hearing. The request and any supporting documentation for the basis of the aggrieved person seeking to commence a contested case shall be submitted within 30 days after the disputed decision is made to the Shellfish Cultivation Lease Review Committee and addressed to the Marine Fisheries Commission Office, Division of Marine Fisheries, 3441 Arendell Street, P.O. Box 769, Morehead City, NC 28557. The request shall be submitted on a form provided by the Division.

(c) The Shellfish Lease Review Committee shall notify the aggrieved person of the date of the public meeting for the Committee to consider the request no later than seven calendar days before the date of the public meeting.

History Note: Authority G.S. 113-134; 113-182; 113-201; 113-202; 143B-289.52;

Eff. January 1, 1991;

Amended Eff. March 1, 1994; September 1, 1991;

15A NCAC 03O .0207 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0207 SHELLFISH LEASE AND FRANCHISE PRODUCTION REPORTS

(a) The owners of shellfish leases and franchises-The holder or holders of a shellfish lease or franchise shall provide an annual production reports report to the Division of Marine Fisheries by March 31 of each year showing the amounts of material planted planted, purchased, and harvested in connection with management for commercial production. Reporting forms will be provided to owners of shellfish bottom leases and recognized franchises during the period that annual notices of rent due are provided to owners of shellfish bottom leases in accordance with G.S. 113 202(j). Reporting forms will be provided to owners of water column leases prior to each annual anniversary date. in accordance with Rules .0201 and .0202 of this Section. The report shall include supporting documentation with evidence of purchased seed in accordance with Rule .0201 of this Section.

(b) The Division shall provide reporting forms annually to each shellfish lease or franchise holder to be used for the annual production report.

(b)(c) Failure to furnish by the holder or holders of the shellfish lease or franchise to submit the required annual production report, correct and in detail requested, report with all required fields completed, or filing a report containing false information, can constitute information constitutes grounds for termination. termination as set forth in Rule .0208 of this Section.

History Note: Authority G.S. 113-134; 113-182; 113-201; 113-202; 113-202.1; 113-202.2; 113-206;

143B-289.52;

Eff. January 1, 1991;

Amended Eff. September 1, 1991;

15A NCAC 03O .0208 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0208 TERMINATION OF PROCEDURES FOR SHELLFISH BOTTOM LEASES AND FRANCHISES AND WATER COLUMN LEASES

- (a) Procedures for termination of shellfish <u>leaseholds leases</u> and <u>franchises</u> are provided in G.S. 113-202. <u>An appeal of the Secretary's decision to terminate a leasehold is governed by G.S. 150B-23.</u>
- (b) Substantial breach of compliance with the provisions of rules of the Marine Fisheries Commission governing use of the leasehold includes the following, except as provided in Paragraph (c) of this Rule:
 - (1) failure to meet shellfish production and marketing requirements for bottom leases or franchises in accordance with Rule .0201 of this Section:
 - (2) failure to maintain a planting effort of cultch or seed shellfish for bottom leases or franchises in accordance with Rule .0201 of this Section:
 - (3) failure either to meet shellfish production and marketing requirements or to maintain a planting effort of cultch or seed shellfish for water column leases in accordance with Rule .0201 of this Section:
 - (4) the Fisheries Director has cause to believe the holder of private shellfish bottom or franchise rights has encroached or usurped the legal rights of the public to access public trust resources in navigable waters, in accordance with G.S. 113–205 and Rule .0204 of this Section; and
 - (5) the Attorney General initiates action for the purpose of vacating or annulling letters patent granted by the State, in accordance with G.S. 146-63.
- (e)(b) Consistent with G.S. 113-202(11) and G.S. 113-201(b), a leaseholder shellfish lease or franchise holder that failed to meet the requirements in G.S. 113-202, G.S. 113-202, G.S. 113-202, Rule .0201 or the Rules of this Section or this Rule that govern a determination of failure to utilize the lease on a continuing basis for the commercial production of shellfish may be granted a single extension period of no more than two years per contract period upon a showing of hardship by written notice to the Fisheries Director his or her or their designee received prior to the expiration of the lease term that documents one of the following occurrences caused or will cause the leaseholder lease or franchise holder to fail to meet lease requirements:
 - (1) death, illness, or incapacity of the <u>leaseholder_shellfish lease or franchise holder_or his_their</u> immediate family as defined in G.S. 113-168 that prevented or will prevent the <u>leaseholder_lease or franchise holder_from working the lease</u>;
 - (2) damage to the <u>shellfish</u> lease <u>or franchise</u> from hurricanes, tropical storms, or other severe weather events recognized by the National Weather Service;
 - (3) shellfish mortality caused by disease, natural predators, or parasites; or
 - (4) damage to the <u>shellfish</u> lease <u>or franchise</u> from a manmade disaster that triggers a state emergency declaration or federal emergency declaration.

(d)(c) In the case of hardship as described in Paragraph (b) of this Rule, the notice shall state the shellfish lease or franchise number. In the case of hardship as described in Subparagraph (e)(1) (b)(1) of this Rule, the notice shall also

state the name of the leaseholder shellfish lease or franchise holder or immediate family member and either the date of death or the date and nature of the illness or incapacity. The Fisheries Director may require a doctor's verification that the illness or incapacity occurred. In the case of hardship as described in Subparagraphs (b)(2) through (b)(4) of this Rule, the notice shall also include documentation of damage to the shellfish lease or franchise. Written notice and supporting documentation shall be addressed to the Director of the Division of Marine Fisheries, 3441 Arendell St., Street, P.O. Box 769, Morehead City, NC 28557.

History Note: Authority G.S. 113-134; <u>113-182</u>; 113-201; 113-202; 113-202.1; 113-202.2; 113-205; <u>113-206</u>; 143B-289.52;

Eff. January 1, 1991;

Amended Eff. May 1, 1997; March 1, 1995; March 1, 1994; October 1, 1992; September 1, 1991;

Temporary Amendment Eff. January 1, 2002; October 1, 2001;

Amended Eff. May 1, 2017; April 1, 2003;

15A NCAC 03O .0209 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0209 TRANSFER OF INTEREST ASSIGNMENT OF SHELLFISH LEASES AND FRANCHISES

- (a) For the purpose of effecting assignments of shellfish leases or franchises in accordance with this Rule:
 - (1) "transfer" shall be defined as any permanent assignment of a shellfish lease or franchise, in whole or in part.
 - (2) <u>"sublease" shall be defined as any temporary assignment of a shellfish lease or franchise, in whole</u> or in part.
- (a) Within 30 days after transfer of ownership of all or any portion of interest in a shellfish lease or franchise, the new owner shall notify the Division, and provide the number of the lease or franchise and the county in which it is located. Such notification shall be accompanied by a management plan prepared by the new owner in accordance with 15A NCAC 03O .0202(b).
- (b) No transfer or sublease of a shellfish lease or franchise, in whole or in part, shall be valid until notice is provided to the Division of Marine Fisheries as provided in Article 16 of Chapter 113 of the North Carolina General Statutes and the Division provides written consent in order to ensure that a transferee or sub-lessee meets the requirements of the North Carolina General Statutes and Marine Fisheries Commission Rules. A transfer may only be made by the use of a form provided and approved by the Division.
- (c) Notice to transfer or sublease a shellfish lease or franchise shall include the shellfish lease or franchise number, county in which the lease or franchise is located, and the name of the transferee or sub-lessee. The transferee or sub-lessee of a shellfish lease shall provide to the Division the required Shellfish Lease Management Plan and proof of completion of training requirements in accordance with Rule .0202 of this Section.
- (b)(d) If the new owner obtains a The smallest portion of an existing shellfish bottom-lease or franchise, it shall not contain less than franchise to be transferred or subleased shall be one-half acre acre and the required notification to the Division shall be accompanied by a survey prepared in accordance with the standards in 15A NCAC 03O .0203(d).

 (c) Within six months after transfer of ownership, the new owner shall complete shellfish cultivation lease training as specified in 15A NCAC 03O .0202(d).
- (e) A shellfish lease or franchise shall not be transferred or subleased to a nonresident of North Carolina in accordance with G.S. 113-202, G.S. 113-202.1, G.S. 113-202.2, and G.S. 113-206.
- (d)(f) Water column leases are not transferrable except when the Secretary approves such transfer-A shellfish water column lease shall only be transferred in accordance with G.S. 113-202.1(f) and G.S. 113-202.2(f).
- (e) In the event the transferee involved in a lease is a nonresident, the Secretary must initiate termination proceedings.

History Note: Authority G.S. 113-134; 113-182; 113-201; 113-202; 113-202.1; 113-202.2; 113-205; 113-206; 143B-289.52; Eff. January 1, 1991; Amended Eff. April 1, 2011; March 1, 1994; September 1, 1991;

Fiscal Impact Analysis of Proposed Rules 15A NCAC 03K .0111, 03O .0203, .0205-.0211

15A NCAC 03O .0210 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0210 STANDARDS AND REQUIREMENTS FOR SHELLFISH-FRANCHISES

(a) The resolution of claims filed under G.S. 113 205 is governed by standards in Departmental Rules 15A NCAC 1G .0200 and .0300. Following receipt of notification that a claim has a valid chain of title, the owner shall provide to the Division within 90 days a survey prepared in accordance with the standards in 15A NCAC 03O .0203(d). Failure to provide the required survey within the time period specified will result in denial of the claim.

(b)(a) Acceptable management plans, Shellfish Management Plans, prepared in accordance with the standards in 15A NCAC 03O .0202(b), Rule .0202 of this Section, shall be provided to the Division of Marine Fisheries within 30 days following formal recognition of a valid chain of title and at ten-year intervals thereafter.

(c)(b) The survey and management plan-Shellfish Management Plan requirements in Paragraphs (a) and (b) Paragraph
(a) of this Rule, Rule and all other requirements and conditions of this Section affecting management of franchises, franchises shall apply to all valid shellfish franchises recognized prior to September 1, 1989. franchises.

(d)(c) Commercial production requirements for franchises shall be identical to that required for shellfish bottom leases in 15A NCAC 03O .0201(e) accordance with Rules .0201 and .0207 of this Section averaged over the most recent three-year period after January 1 following the second anniversary of the dates of recognition of claims as valid shellfish-franchises and continuing throughout the term of management plans-Shellfish Management Plans required in Paragraph (b) (a) of this Rule. Annual reporting of commercial production shall be submitted upon receipt of forms provided by the Division for that purpose.

History Note: Authority G.S. 113-134; <u>113-182</u>; <u>113-201</u>; 113-202; 113-205; <u>113-206</u>; <u>143B-289.52</u>;

Eff. January 1, 1991;

Amended Eff. October 1, 2008; September 1, 1991;

15A NCAC 03O .0211 is proposed for readoption with substantive changes as follows:

15A NCAC 03O .0211 PROTECTION OF PRIVATE SHELLFISH INTEREST FISHING GEAR REQUIREMENTS FOR SHELLFISH LEASES AND FRANCHISES

(a) It is shall be unlawful to use any trawl net, long haul seine, swipe net, dredge, or mechanical method for clams or oysters shellfish on any shellfish lease or franchise except: unless it has been duly authorized by the Fisheries Director as provided in 15A NCAC 3K .0206 and .0303.

- (1) for a holder of a Permit to Use Mechanical Methods for Shellfish on Shellfish Leases or Franchises; or
- (2) for the purpose of placing and retrieving cages, bags, or other aquaculture gear within any shellfish lease or franchise.

(b) Permits to Use Mechanical Methods for Shellfish on Shellfish Leases or Franchises shall be issued by the Division of Marine Fisheries in compliance with 15A NCAC 03O .0500.

History Note: Authority G.S. 113-134; 113-182; 113-201; 113-206; 143B-289.52;

Eff. October 1, 1992;

Amended Eff. August 1, 1998;

Readopted Eff. (Pending legislative review pursuant to S.L. 2019-198).

Appendix III: Shellfish Aquaculture User Conflict Study

Study On How to Reduce User Conflict Related to Shellfish Cultivation Leases





N.C. Department of Environmental Quality, Division of Marine Fisheries and N.C. Marine Fisheries Commission

November 8, 2019

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I. Introduction

The North Carolina General Assembly passed Session Law ("S.L.") 2019-37 effective July 1, 2019. The General Assembly noted that the purpose of the bill is "to provide further support to the shellfish aquaculture industry in the State of North Carolina." Section 9 of the bill requires the North Carolina Department of Environmental Quality ("NCDEQ"), Division of Marine Fisheries ("DMF") and the North Carolina Marine Fisheries Commission ("MFC") to study how to reduce user conflict related to shellfish cultivation leases, and to adopt rules and reform internal operating procedures consistent with the findings of the study.

Fiscal Impact Analysis of Proposed Rules 15A NCAC 03K .0111, 03O .0203, .0205-.0211

² https://www.ncleg.gov/EnactedLegislation/SessionLaws/PDF/2019-2020/SL2019-37.pdf

User conflicts are generally described as disagreements that arise between multiple users of areas leased for private shellfish cultivation purposes, commonly referred to as shellfish aquaculture or shellfish leases. Individuals use public trust waters in a variety of ways including navigating, swimming, hunting, fishing, and other recreational activities. The increase in coastal populations coupled with the growth of the shellfish aquaculture industry, particularly with respect to utilizing floating gear, has led to user conflicts regarding the use of coastal and estuarine waters.³

DMF and MFC address topics pertinent to user conflicts in the shellfish aquaculture industry in this study. The study also discusses the existing regulatory framework governing shellfish leases in North Carolina. DMF anticipates future amendments to shellfish lease regulations and internal changes to improve operating procedures with the objective of reducing user conflict issues. Efforts are also made to identify challenges and inefficiencies in the existing Shellfish Lease Program with suggested measures to remedy these deficiencies. The deadline for completing this study is January 1, 2020. The deadline to adopt new rules is March 1, 2021.

Some of the recommendations in this study will likely be included in future studies and directives mandated by S.L. 2019-37. These studies include:

- Shellfish Aquaculture Enterprise Areas ("SEA") (Section 1.(a) 1.(c));
- SEAs: Moratorium Areas (Section 1.(d));
- Pamlico Sound Shellfish Aquaculture Pilot Project (Section 2);
- Administrative Remedy for Shellfish Leasing Appeals (Sections 6.(a), 6.(b)).

DMF staff compiled information for this report from its own ongoing work, stakeholder groups, shellfish and aquaculture experts, shellfish growers, non-governmental organizations, and internal DMF shellfish staff with expertise in this area. DMF also drew upon the findings and recommendations from previous legislative studies related to shellfish leases and aquaculture. Cumulatively, the recommendations listed in this study include the provisions mandated in S.L. 2019-37, as well as considerations for enhancing existing procedures for managing the shellfish aquaculture industry and the resulting user conflicts.

The success of shellfish aquaculture operations and the high-demand for new shellfish leases exceeds traditional DMF permitting and site selection capabilities. Achieving and sustaining a successful shellfish aquaculture industry will depend on, among other things, resolution of these user conflicts. DMF envisions approaching and addressing these issues in collaboration with multiple user groups to provide outreach and feedback to ensure shellfish aquaculture operations are consistent with sound science, public trust uses, business planning, marketing, and training. The DMF Shellfish Lease Program may not be sufficiently staffed or funded to accomplish the recommendations made in this study.

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³ Overcoming Impediments to Shellfish Aquaculture through Legal Research and Outreach: Case Studies (National Oceanic and Atmospheric Administration, U.S. Department of Commerce), 2019 http://nsglc.olemiss.edu/projects/shellfishaquaculture/index.html

II. Background

A. North Carolina's Shellfish Lease Program

DMF administers the Shellfish Lease Program through its Habitat and Enhancement Section. Shellfish leases using public trust bottom areas for shellfish aquaculture (in brackish and higher salinity waters) have existed in North Carolina for over 150 years. Shellfish leases are divided into two types: bottom and water column. You must have a bottom lease to have a water column lease. The water column lease can be granted over the entire footprint of a bottom lease, or on a portion of the lease. A shellfish franchise is similar to a bottom lease except that they are recognized submerged lands claims. Shellfish growers traditionally employed cultch on bottom leases or bed clams under netting. In 1989, the General Assembly expanded traditionally based growing methods by authorizing the leasing of the water column for shellfish aquaculture for areas above a shellfish bottom lease which allow for intensive gear to be used. Extensive shellfish culture means shellfish grown on the bottom without the use of cages, racks, bags, or floats. Intensive shellfish culture means shellfish grown on the bottom or in the water column using cages, racks, bags, or floats. The General Assembly amended the shellfish leasing statutes to allow the use of gear up to 18 inches off the bottom for bottom leases in 2015.⁴

While shellfish water column leases have been authorized since 1989, their use has only recently increased in popularity. The large growth in shellfish water column leases has increased the use of intensive gear leading to a rise in user conflicts. DMF has observed a substantial growth in submission of shellfish lease applications in the past several years with the caveat of a slight decrease in 2018 due to Hurricane Florence and Tropical Storm Michael (Table 1; Figure 1). There are eight coastal counties which have shellfish leases (Figures 2 - 4). As of October 8, 2019, there were 50 shellfish franchises, 224 shellfish bottom leases, and 88 shellfish water column leases in North Carolina covering 1,736 acres (Table 2; Figure 5). Carteret County has 127 shellfish leases, the largest of any North Carolina county (Table 2; Figure 5). Onslow County has the most acres covered by shellfish leases at 527 acres (Table 2; Figure 5). The number of shellfish lease applications in North Carolina has increased exponentially (1,491 percent) from the period of 2005 to 2011 (22 lease applications) compared to the period of 2012 to 2019 (350 lease applications). This is an increase from 2011 (two lease applications) to 2019 (106 lease applications) of 5,200 percent (Table 1; Figure 4).

By way of comparison, the Commonwealth of Virginia has a much larger shellfish lease industry, with 5,400 leases covering 122,000 acres. Currently, Virginia has hundreds of pending applications with a staff capability to process approximately 100 applications per year.

⁴ N.C.G.S. § 113-202(r)

Table 1. Total shellfish lease applications for bottom leases and water column leases from 2005 through 2019.

	Applications					
Year	Bottom Lease	Water Column				
2005	3	1				
2006	5	1				
2007	3	0				
2008	5	0				
2009	0	0				
2010	1	1				
2011	1	1				
2012	8	6				
2013	6	10				
2014	8	7				
2015	9	2				
2016	10	11				
2017	52	46				
2018	36	33				
2019	58	48				
Total	205	167				

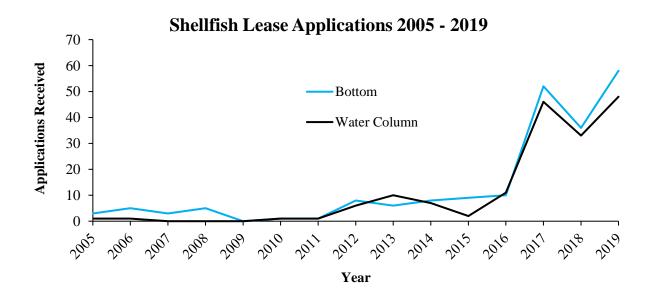


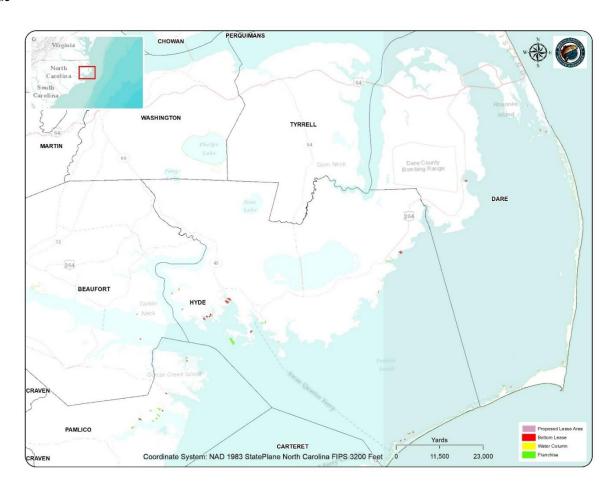
Figure 1. Total shellfish lease applications for bottom leases and water column leases from 2005 through 2019.

Table 2. Total number and acres of shellfish aquaculture leases per county and lease type sorted by total number of leases (highest to lowest).

	Bottom		Water Column		Franchise		Total	
County 1	Number	Acres	Number	Acres	Number	Acres	Number	Acres ²
Carteret	87	318	38	98	2	2	127	417
Onslow	43	323	11	29	28	204	82	556
Pender	43	225	9	10	0	0	52	236
Hyde	26	255	11	40	9	236	46	531
Pamlico	9	52	8	48	10	71	27	171
N. Hanover	7	17	5	12	1	3	13	33
Dare	7	24	5	18	0	0	12	42
Beaufort	2	6	1	1	0	0	3	6
Total	224	1,219	88	255	50	517	362	1,736

¹ Current as of October 8, 2019

² Total only includes bottom and franchise because water column leases are over bottom lease



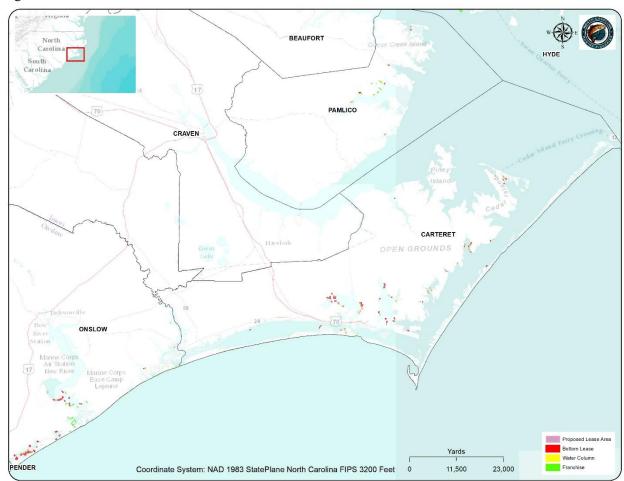


Figure 2. Active and proposed shellfish leases (bottom, water column, and franchise) in the northern region of the state.

Figure 3. Active and proposed shellfish leases (bottom, water column, and franchise) in the central region of the state.

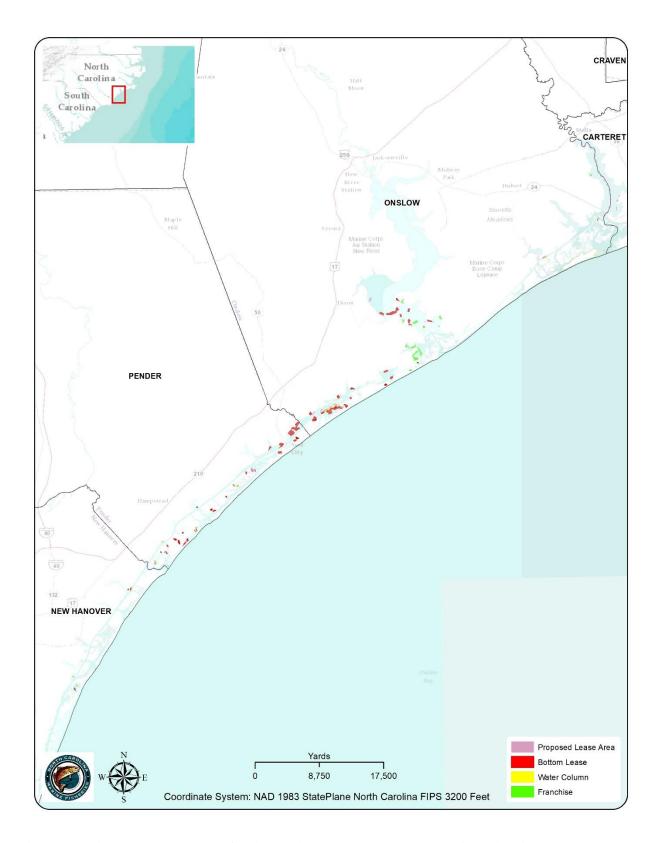


Figure 4. Active and proposed shellfish leases (bottom, water column, and franchise) in the southern region of the state.

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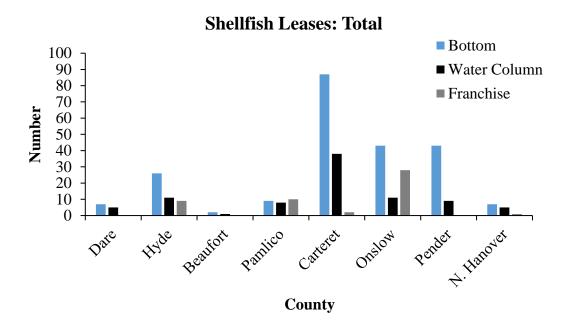


Figure 5. Total shellfish leases (bottom, water column, franchise) in North Carolina by county (north to south) and lease type.

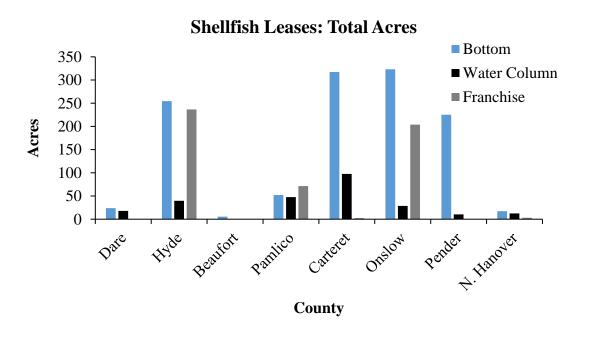


Figure 6. Total shellfish lease acres (bottom, water column, franchise) in North Carolina by county (north to south) and lease type.

DMF grants shellfish aquaculture leases in North Carolina in public trust waters. Public trust resources are land and water areas, whether publicly or privately owned, which are subject to Public Trust Rights as defined under North Carolina law. Public Trust Rights are held in trust by the state for the use and benefit of all citizens of North Carolina in common. Public Trust Rights include, but are not limited to, the right to "navigate, swim, hunt, fish, and enjoy all recreational activities in" North Carolina waters.⁵ Public Trust Rights cannot be conveyed in a manner that adversely affects public trust uses. The General Assembly charged NCDEQ with the stewardship of the public trust marine and estuarine resources of the state. The NCDEQ Secretary may delegate that authority to the DMF Director.⁶

B. Federal Permitting - U.S. Army Corps of Engineers' Nationwide Permit 48

Permitting for shellfish aquaculture leasing is accomplished both by statute, in part under N.C.G.S. § 113-202, and through the U.S. Army Corps of Engineers' ("USACE") Nationwide Permit 48 ("NWP 48") process - Commercial Shellfish Aquaculture Activities. The USACE re-issued NWP 48 in 2017. NWP 48 encompasses activities related to commercial shellfish aquaculture in waters of the United States. A recent federal court decision in the State of Washington could have an impact on future use of NWP 48 in North Carolina. NCDEQ's Office of the General Counsel will continue to monitor the potential impacts of this decision and any related case law.

C. Increased Review of Shellfish Lease Applications and Resulting User Conflicts

A substantial increase in the number of user conflicts coincides with the recent expansion of the shellfish aquaculture industry and its use of intensive gear in water column leases (Table 2; Figure 1). The General Assembly promulgated several legislative changes affecting the Shellfish Lease Program in recent years in order to help address these conflicts. The MFC in 2018 also attempted to impose a moratorium for shellfish leases to pause processing of applications long enough to address user conflict issues related to navigation, waterbody carrying capacity, hunting, waterfront development, and applicant experience. Additionally, DMF increased its staff review of shellfish aquaculture lease applications, enlarged notice processes for public hearings on proposed leases, and directed more focus on possible conflicting uses in proposed lease areas. These efforts have resulted in more quality information, both in terms of technical facts and stakeholder opposition, reaching the DMF Director to better inform a decision on whether to grant a shellfish lease application.

The General Assembly's legislative findings and declaration of policy for cultivation of shellfish in North Carolina states that "shellfish cultivation provides increased seafood production and long-term economic and employment opportunities" and "provides increased ecological benefits to the estuarine environment . . ." Further, to enhance shellfish cultivation, the policy of the State is to encourage the development of private, commercial shellfish cultivation in ways that are compatible with other public

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⁵ N.C.G.S. § 1-45.1

⁶ N.C.G.S. § 113-131(b)

⁷ Nationwide Permit 48 - Commercial Shellfish Aquaculture Activities Effective Date: March 19, 2017; Expiration Date: March 18, 2022 (NWP Final Notice, 82 FR 1860)

⁸ The Coalition to Protect Puget Sound Habitat v. U.S. Army Corps of Engineers et al., No. 17-1209RSL, 2019 WL 5103309 (W.D. Wash. Oct. 10, 2019)

⁹ S.L. 2015-263; S.L. 2017-190; S.L. 2019-37

¹⁰ N.C.G.S. § 113-201(a)

uses of marine and estuarine resources such as navigation, fishing, and recreation. ¹¹ Enhancing private shellfish cultivation includes granting shellfish cultivation leases that benefit the public interest. ¹² Minimum standards for compatibility are provided to discern suitable areas for shellfish cultivation based on numerous factors, including but not limited to water quality, ability to cultivate shellfish, existing shellfish resources on the proposed lease, and other public trust uses in the area. ¹³ Shellfish aquaculture leases can often conflict with public trust uses, which makes balancing these issues and determining compatibility challenging and somewhat subjective.

D. Recent Increase in Legal Challenges to DMF's Shellfish Lease Decisions

User conflict issues have resulted in an increase in contested cases filed by potentially aggrieved petitioners in the N.C. Office of Administrative Hearings ("OAH"), as well as other legal challenges. The N.C. Department of Justice represents DMF in defending DMF's shellfish leasing decisions. Many user conflict cases brought by riparian owners adjacent to lease locations seem to be driven by a concern for impairment of view, also known as "viewshed." Viewshed generally means the natural environment that can be seen from nearby riparian property. Viewshed is not a public trust right traditionally acknowledged under North Carolina common law. Discussion of several recent cases may be helpful in understanding user conflict concerns.

In 2016, a petitioner in Pender County challenged DMF's denial of a bottom lease and associated water column lease based on findings by DMF that public trust user conflicts would result. ¹⁴ The Administrative Law Judge's ("ALJ") decision states:

At issue in this particular contested case is whether or not the proposed shellfish lease is 'compatible' with the other uses of the area for navigation, fishing and recreation. Neither the general statutes nor associated Marine Fisheries Commission regulations define or indicate how much use within a proposed lease site must be present in order for the lease to warrant denial as being incompatible with those public uses. There is no definition to define what constitutes the area of the lease, or how it might actually impact navigation, fishing or recreational use. The evidence shows that certain areas close to the proposed site are more heavily used than the exact footprint of the proposed lease site. Fact that there is heavy traffic nearby the proposed lease does NOT necessarily make that area inappropriate for leasing . . . The law does not require an area to be traffic free to be approvable because it would not make any sense and would be an almost impossible requirement to meet. It is the policy of the State of North Carolina to encourage the development of private and commercial shellfish cultivation so long as it is done in a manner compatible with other public uses of the marine and estuarine resources.

15

Ultimately, the ALJ overturned DMF's denial of the lease application. DMF contemplated appealing the decision to Superior Court, but after further consideration simply decided to issue the lease.

¹¹ N.C.G.S. § 1-45.1

¹² N.C.G.S. § 113-202(a)

¹³ Id

¹⁴ Ronald Sheffield v. NCDEQ/DMF, 16 EHR 02397 (Pender County)

¹⁵ Ronald Sheffield v. NCDEQ/DMF, 16 EHR 02397 (Pender County)

A second contested case was filed in 2018 by a Homeowner's Association ("HOA") located along a nearby shoreline. The appeal challenged DMF's issuance of a shellfish bottom lease and associated water column lease. The HOA alleged public trust user conflicts, though much of the witness testimony indicated that "viewshed" was the significant concern for the HOA's members. The ALJ noted that "[o]ne minimum statutory criteria of particular relevance to this case is that '[c]ultivation of shellfish in the leased area will be compatible with lawful utilization by the public of other marine and estuarine resources.' "16 The ALJ went on to state that:

[t] he proper interpretation of a law or rule is a question of law, and an agency interpretation of a statute or rule is not binding on the undersigned. Nevertheless: It is a tenet of statutory construction that a reviewing court should defer to the agency's interpretation of a statute it administers 'so [] long as the agency's interpretation is reasonable and based on a permissible construction of the statute. The phrase 'compatible with' under N.C.G.S. § 113-202(a)(3) is not further defined by statute or regulation.' DMF does not interpret this standard to mean there can be no impact to other public uses. Instead, DMF interprets this minimum standard to mean that existing uses must be able to exist along with the shellfish lease within the general area at the same time.

Ultimately, in upholding DMF's granting of the shellfish lease, the ALJ stated "that DMF's interpretation of the phrase 'compatible with' is reasonable, is consistent with, and supported by the plain language of the statute and statutory framework." The ALJ then went further, finding that "[e]ven in the absence of deference, the undersigned independently adopts DMF's interpretation of this minimum standard. The DMF does not consider impacts on viewshed as a basis for denying a shellfish lease, as this is not a criterion in the relevant statutes or rules pertaining to shellfish leases."¹⁷

A group of riparian owners brought suit in OAH challenging a shellfish bottom lease and water column lease granted in Myrtle Grove Sound in 2018. The owners claimed the action was brought to "protect the right to a view they are entitled to as a result of their riparian property ownership." The complaint stated, among other things, that "[o]peration of the commercial shellfish cultivation in the area ... also has caused significant deterioration in Plaintiffs' water views, resulting in substantial devaluation of Plaintiffs' properties." ¹⁹ Ultimately, the dispute was resolved based on an unrelated submerged lands claim issue. As part of the case disposition, the grantee of the previously approved shellfish lease moved his operation to a newly approved lease area in Pender County.

Three additional petitions for contested cases were filed challenging the approval of two shellfish bottom leases and associated water column leases located near each other in Myrtle Grove Sound in 2019. The Petitioners claimed "the leases are incompatible with lawful utilization by the public of other marine and estuarine resources" and that "the right of the public to utilize marine and estuarine resources includes

¹⁶ 8.5 Marina Village John F Matthews VP v. NCDEQ and Samuel G. Boyd, 17 EHR 01382 (Carteret County)

¹⁸ Hormoze Goudarzi and wife, Suzanne Gourdarzi, Oak Forest Properties, LLC, Billy King and Barbara King v. NCDEQ et al., 18 CVS 1470 (New Hanover Superior Court)

¹⁹ Hormoze Goudarzi and wife, Suzanne Gourdarzi, Oak Forest Properties, LLC, Billy King and Barbara King v. NCDEQ et al., 18 CVS 1470 (New Hanover Superior Court)

the right to view and enjoy species . . . whose habitat Petitioners believe may be threatened by operation of the shellfish leases." These cases were resolved by virtue of the New Hanover moratorium area established by S.L. 2019-37, Section 7, that went into effect July 1, 2019.

E. DMF's Shellfish Lease Program is Under-Resourced

North Carolina's shellfish aquaculture leasing program is implemented by DMF's Shellfish Lease Program which is currently staff and resources limited. A significantly increasing volume of work may require additional resources. By comparison, other states shellfish aquaculture programs have significant staff and operation funds for administration.

Virginia's shellfish lease program is staffed by eight dedicated employees, including two managers, one mapper and draftsman, one clerical position and four surveyors. The State of Maine has substantially fewer shellfish leases and acreage than North Carolina but has over six full time positions dedicated to administering its shellfish lease program. The State of Maryland has eight full time positions dedicated to administering its program. DMF believes the Shellfish Lease Program's small staff and low budget significantly inhibits the industry by increasing the time needed to evaluate whether to grant a lease or defend lease decision appeals. DMF staff believes this delay will be further exacerbated by the mandated but unfunded future studies and directives from the General Assembly in S.L. 2019-37.

III. Sources of Information Concerning User Conflicts

A. Previous Legislative Studies

There have been previous legislative studies concerning shellfish aquaculture over the past few years in North Carolina. Each study has included recommendations for increased resources and positions, regulatory reform, program evaluations, and collaboration. While previous recommendations have been considered, many have not yet been adopted. Details of each report are outlined below.

1. 2016 - Shellfish Aquaculture Plan Report²¹

The legislatively mandated 2016 Shellfish Aquaculture Plan Report recommended funding four full-time positions and recurring resources to adequately operate the Shellfish Lease Program. The report also included recommendations to form a taskforce comprised of diverse stakeholder and experts from industry, academia, and state agencies in order to develop a comprehensive North Carolina Shellfish Aquaculture Plan. Other recommendations from the report included:

²⁰ Masonboro Island Club and Gary W. Ahlberg v. NCDEQ/DMF, 19 EHR 00991; Sandra A. Fisher v. NCDEQ/DMF, 19 EHR 00983; John A. Marriott v. NCDEQ/DMF, 19 EHR 01057; The Tides Homeowners Association, Inc. v. NCDEQ/DMF, 19 EHR 01055 (New Hanover County)

²¹ https://ncseagrant.ncsu.edu/ncseagrant_docs/oysters/DEQ%202016%20Shellfish%20Aquaculture%20Plan%20Report.pdf

- In partnership with N.C. Sea Grant ("NCSG"), develop a detailed proposal for a Shellfish Propagation and Aquaculture Training Program to be enacted with NCSG;
- Modify the initial shellfish bottom lease application fee from \$200 to \$400, which is non-refundable, to help offset the cost of lease administration, mapping and marking;
- Change statutes to allow rent, renewal and production notices to be mailed to lease holders in mid-April to allow previous year production reporting in the division trip ticket program to be finalized. Allow older leases expiring in April to be extended until June 30 to bring all shellfish leases into the same renewal period;
- To simplify the application process for shellfish growers, develop one application and combine the aquaculture permits and package with a shellfish lease;
- Strengthen statutes to increase the penalties for theft on shellfish leases;
- Policy and statutory changes needed to support the recommendations.

2. 2018 - N.C. Strategic Plan for Shellfish Mariculture: A Vision to 2030²²

The North Carolina Policy Collaboratory ("Collaboratory") was directed to convene stakeholder meetings in 2016 aimed at advancing efforts to bolster and promote North Carolina's shellfish industry.²³ Legislation was amended, adding a mandate for the Collaboratory to prepare a Shellfish Aquaculture Plan by December 31, 2018.²⁴ To fulfill the mandates laid out in Senate Bill 257, the Collaboratory formed the Shellfish Mariculture Advisory Committee ("SMAC") to generate a report of findings and recommendations to the General Assembly. The final report was submitted on December 30, 2018.²⁵

The SMAC's principal goal was to leverage a broad base of expertise to create a comprehensive plan for the shellfish aquaculture industry while balancing the needs of other citizens of North Carolina who utilize the public trust resources of the coast. The recommendations generated were intended to inform the General Assembly on possible legislative actions that could address many of the current user conflict issues in the industry. The report detailed 21 recommendations including, among others:

- Vision for industry development Achieve \$100 million annual shellfish mariculture value (\$33 million dockside sales) by 2030;
- Appropriate recurring funding to establish a new section, the Shellfish Leasing Section, at the DMF. Defraying costs of Shellfish Leasing Section: Increase non-refundable shellfish lease application filing fee to \$500 dollars; establish a fee schedule for lease surveys payable to the DMF; shift financial responsibility for advertising for public scoping from agency to the applicant; and increase annual rent;
- Statutory changes Amend North Carolina General Statute §113-202 to afford the Secretary of the NCDEQ substantial discretion in balancing public trust uses;
- The DMF should designate appropriate tracts as SEAs containing multiple, connected parcels available for shellfish mariculture and managed by the DMF;
- In Pamlico Sound, the Secretary of the NCDEQ should be granted discretion to grant up to three (total) 50-acre (each contiguous) water column or bottom leases, each obtained by a single lease application. These lease tracts must be separated from each other, and from shore, by at least 250 yards. Otherwise, current lease size maximums, including overall acreage possession limits for

²² https://collaboratory.unc.edu/files/2019/01/NC-Strategic-Plan-for-Shellfish-Mariculture-Final-2018.pdf

²³ S.L. 2016-94, Section 14.11.(d)

²⁴ Senate Bill 257, Section 13.13.(b)

²⁵ North Carolina Strategic Plan for Shellfish Mariculture: A Vision to 2030 (Drs. Joel Fodrie, Charles Peterson, Christine Voss, and Christopher Baillie on behalf of the North Carolina Shellfish Mariculture Advisory Committee)

- any single entity, should be retained throughout the state, and no more than three large water column or bottom leases may be established in Pamlico Sound until 2025;
- Increase utilization requirement and strictly monitor and enforce "use it or lose it" policy for shellfish leases;
- Institute higher minimum fines and mandatory restitution for those convicted of stealing or damaging property on shellfish leases. Elevate charges for theft from any contained culture (e.g. cages, bags) or free-on-bottom operation (including clams under netting) to a felony with a minimum fine of \$2,500 and mandatory restitution to the property owner. For those convicted who hold a commercial license, first offenses will result in a one-year loss of license, and second offenses will result in a permanent loss of license;
- Amend North Carolina General Statute §113-203 to allow nursery of shellfish in waters classified as prohibited.

The report addressed the need for further understanding of the ecological and societal implications of shellfish aquaculture which hinder the ability of government agencies to determine where shellfish aquaculture is most suitable. The report explains the need for regionally specific information on social carrying capacity of shellfish aquaculture and other tools to minimize user conflict. While research into the social effects of the expanding shellfish aquaculture industry cannot ensure there will be no user conflict issues, these inquiries can facilitate a better understanding of user conflicts and stakeholder perceptions which ultimately inform lawmakers on future legislation and policy.

Research efforts can help identify social sustainability and conflict resolution approaches that will be important to developing an overall understanding of the relationship of the shellfish aquaculture industry and the surrounding coastal communities. Social carrying capacity is inherently location specific and the amount of shellfish aquaculture that is socially acceptable within an area will vary among regions of the coast.

Another recommendation from the report included appropriate funding and positions for the Shellfish Lease Program. The report recommended recurring funding for three additional full-time equivalent positions for the Shellfish Lease Program. Additionally, the recommendation included increased recurring appropriations to the DMF for the purposes of administering shellfish leasing. The report concluded that additional positions will provide much needed assistance with field operations (e.g. mapping, sampling, and marking leases), a need that will continue to increase as the industry grows and as DMF develops and manages SEAs.

B. Collaboration and Public Outreach

DMF staff has collaborated closely with local stakeholders to help identify and address user conflicts, most recently through the 2018 SMAC process discussed above. DMF has also been working to address user conflict issues with the National Ocean and Atmospheric Administration - National Centers for Coastal Ocean Science specifically on the Bogue Sound Pilot Study which was completed this year. The result of this partnership was a spatial analysis tool and random sampling grids tool used for shellfish lease siting. The Shellfish Lease Program meets with internal DMF reviewers to ensure the lease review process is thorough and efficient. In 2015, DMF also began coordinating with the North Carolina Division of Coastal Management ("DCM") as a review and commenting agency for shellfish lease

applications, based on their expertise with user conflicts in coastal development. Finally, DMF collaborated with the USACE on the 2017 update of the NWP 48.²⁶

The University of North Carolina Wilmington ("UNCW") created a tool in 2014 to assist new or current shellfish growers in siting areas for shellfish leases.²⁷ The online tool maintained by UNCW is designed as an interactive decision-support tool to provide information on site suitability when determining potential areas for shellfish leases. The data provided by the tool include salinity, depth, shellfish growing area classifications, boat access areas, surrounding land cover, and current shellfish aquaculture operations.

Public outreach takes place in a variety of ways including numerous presentations to local municipalities, educational institutions, and professional conferences to better inform stakeholder groups and interested parties about the Shellfish Lease Program. For example, DMF is currently collaborating with NCSG and the North Carolina Shellfish Growers Association on regional shellfish aquaculture workshops scheduled for December 3-5, 2019. These workshops are intended to solicit input from shellfish growers about their experiences including user conflicts issues.

DMF staff have also been working on new web-based solutions to more widely inform the public, shellfish growers, potential shellfish lease applicants, and other stakeholders about pending shellfish lease applications to allow for a more robust notification and comment process. DMF staff implemented new temporary marking requirements for proposed shellfish leases to increase visibility to ensure better notification to other area public trust users. DMF staff found that notification efforts beyond those required by the shellfish lease law were helpful in getting more information regarding objections and concerns to property owners and user groups near a proposed lease. Feedback, in turn, provides additional information for the DMF Director to consider as part of a shellfish lease decision.

C. User Conflict Information from Other States

Although the concept of public trust waters somewhat differs among states, the larger user conflict issues created by shellfish aquaculture seems to remain constant. Like North Carolina, most other states which permit shellfish aquaculture require that those operations not unreasonably interfere with other public trust uses. The National Sea Grant College Program in 2019 produced several case studies concerning impediments to shellfish aquaculture across the country. ²⁸ DMF looks forward to examining these recent studies to determine if there are approaches and lessons learned elsewhere that could be applied in North Carolina.

²⁶ Nationwide Permit 48 - Commercial Shellfish Aquaculture Activities. Effective Date: March 19, 2017; Expiration Date: March 18, 2022. (NWP Final Notice, 82 FR 1860)

²⁷ https://uncw.edu/benthic/sitingtool/

²⁸ Overcoming Impediments to Shellfish Aquaculture through Legal Research and Outreach: Case Studies (National Oceanic and Atmospheric Administration, U.S. Department of Commerce), 2019

1. Leasing Authorities

The leasing of public waters for aquaculture goes through an established public process in all states.²⁹ This public process ensures that concerned stakeholders receive both sufficient notification of proposed leases and an opportunity to raise and address their concerns publicly, though the specifics of these processes vary among states. There are various governmental frameworks among states created to manage the shellfish aquaculture industry. Some states have treated shellfish aquaculture as a form of agriculture, while other states include shellfish aquaculture in agencies managing natural resources.

Numerous states, including Florida, Maine, Maryland, New Jersey, and the Commonwealth of Virginia, have established aquaculture advisory councils which provide managers expert guidance through the council membership. In most states, shellfish applications are processed and decided by the same state-level agency, though Massachusetts and New York make lease decisions at the local level. For example, oyster aquaculture in New York is only approved on private lands or on submerged lands granted by the state to local municipalities which are then charged with developing and managing leasing programs. Similarly, in Massachusetts the city council or mayor of each municipality has authority to issue shellfish aquaculture licenses (or leases). While the aquaculture lease decisions in New York and Massachusetts are made by local municipalities, state and federal statutory requirements are still a large component in determining the policy affecting the industry participants.³⁰

2. Siting Authorities

Siting authorities review proposed lease sites and are tasked with addressing and balancing potential conflicts during the shellfish aquaculture lease application review process.³¹ Florida, Maryland, New Jersey, and Virginia manage siting bodies that, when reviewing applications, provide notice to applicants if potential issues are identified, and provide recommendations or set conditions on leases if issued. Some states, however, take a more proactive front-end approach, such as Maine and Rhode Island.

In Maine, the Department of Marine Resources mandates that applicants have a pre-application meeting to discuss proposed operations with the Department, harbormaster, and/or the municipal officers of the town in which the applicant wishes to apply. Similarly, in Rhode Island, the Coastal Resources Management Council requires applicants to complete a Preliminary Determination process which involves meeting with regulating agencies, town officials, and the Rhode Island Department of Environmental Management to discuss proposed plans. In both states, meetings allow officials who are familiar with competing uses in the area to advise applicants of potential user conflict issues to give them an opportunity to modify applications before submittal.

²⁹ http://www.ct.gov/deep/cwp/view.asp?a=2705&q=431902&depNav_GID=1622; https://www.freshfromflorida.com/Divisions-Offices/Aquaculture; https://www.maine.gov/dmr/aquaculture; http://dnr.maryland.gov/fisheries/pages/aquaculture/index.aspx https://www.capecodextension.org/marine/semac/; https://www.nj.gov/dep/fgw/pdf/marine/shellfish_leasing_policy_atlantic.pdf; http://assembly.state.ny.us/leg/?default_fld=&bn=A07120&term=2011&Summary=Y&Actions=Y&Votes=Y&Memo=Y&Text=Y; http://www.shellfishri.com/ri-shellfish-initiative/; http://www.mrc.state.va.us/Shellfish_Aquaculture.shtm

³⁰ http://www.ct.gov/deep/cwp/view.asp?a=2705&q=431902&depNav_GID=1622; https://www.freshfromflorida.com/Divisions-Offices/Aquaculture; https://www.maine.gov/dmr/aquaculture; http://dnr.maryland.gov/fisheries/pages/aquaculture/index.aspx https://www.capecodextension.org/marine/semac/; https://www.nj.gov/dep/fgw/pdf/marine/shellfish_leasing_policy_atlantic.pdf; http://assembly.state.ny.us/leg/?default_fld=&bn=A07120&term=2011&Summary=Y&Actions=Y&Votes=Y&Memo=Y&Text=Y http://www.shellfishri.com/ri-shellfish-initiative/; http://www.mrc.state.va.us/Shellfish_Aquaculture.shtm
³¹ Id.

3. The Permit Process

The permitting process for shellfish aquaculture leases can be complicated, lengthy and represent a considerable barrier to entry for some potential applicants.³² Many states have been dealing with similar issues much longer then North Carolina. To streamline the process, reduce the cost of permitting, and mitigate user conflict issues, states such as Maryland, Florida, Delaware, Massachusetts, New Jersey, New York, and California have established SEAs where state agencies perform aquaculture lease siting, including environmental and public trust suitability review, as well as acquisition of necessary Federal permits. These states then sub-lease smaller parcels within the SEA to shellfish growers. This makes the process more efficient on the back-end, where states only have to verify the suitability of an applicant and issue a permit to operate within those pre-approved SEAs.

Streamlined permitting encourages industry development by shifting the approval burden to the state, eases the state's lease back-end application burden, and helps mitigate user conflict issues. This process also gives individual states greater authority to regulate the activities conducted within the designated area.

4. Shellfish Lease Size and Acre Caps

A common component in user conflicts with shellfish aquaculture revolves around the fear that shellfish aquaculture will eventually take over the majority of a waterbody.³³ In New York and Rhode Island, acreage caps have been used to curb fears in areas of high residency and water use. Suffolk County (New York) established an acreage cap of 60 acres that can be leased each year for new leases. In Rhode Island, a maximum of five percent of a coastal salt pond can be leased for shellfish aquaculture. In North Carolina, individual leases are restricted to 10 acres with no more than 50 acres held by an individual or corporation. Beyond size caps and residency requirements, leases are subject to a variety of parameters in different states that limit their expansion such as lease terms, physical restrictions, and other parameters.34

5. Education

In North Carolina, Carteret Community College offers the Aquaculture Technology Program which provides courses in shellfish aquaculture along with hands on experience working on shellfish farms.³⁵ Currently, North Carolina requires shellfish lease applicants to complete an examination scoring a minimum of 70 percent based on an educational package provided by the DMF. DMF established the examination to demonstrate the applicant's knowledge of:

- Shellfish lease application process;
- Shellfish lease planting and production requirements;
- Lease marking requirements;

³³ http://www.ct.gov/deep/cwp/view.asp?a=2705&q=431902&depNay GID=1622; https://www.freshfromflorida.com/Divisions-Offices/Aquaculture; https://www.maine.gov/dmr/aquaculture; http://dnr.maryland.gov/fisheries/pages/aquaculture/index.aspx https://www.capecodextension.org/marine/semac/; https://www.nj.gov/dep/fgw/pdf/marine/shellfish_leasing_policy_atlantic.pdf; http://assembly.state.ny.us/leg/?default_fld=&bn=A07120&term=2011&Summary=Y&Actions=Y&Votes=Y&Memo=Y&Text= Y http://www.shellfishri.com/ri-shellfish-initiative/; http://www.mrc.state.va.us/Shellfish_Aquaculture.shtm

³⁵ https://www.carteret.edu/programs/aquaculture-technology/

- Lease fees:
- Shellfish harvest area closures due to pollution;
- Safe handling practices;
- Lease contracts and renewals;
- Lease termination criteria;
- Shellfish cultivation techniques.

Many states have cooperative extension programs which provide classes and training that introduce potential applicants to the fundamentals of shellfish aquaculture.³⁶ The University of Florida IFAS Shellfish Aquaculture Extension Program, the University of Maryland Extension's Oyster Aquaculture and Education Program, and Southeastern Massachusetts' Aquaculture Center all offer online classes and/or in person workshops to educate potential applicants. These programs are federally funded through the Cooperative State Research, Education, and Extension Service and other federal agencies. Some states such as Virginia, Rhode Island, and Florida have developed mandatory training requirements. These requirements tend to focus on sanitation issues and harvest procedures as they help states comply with the National Shellfish Sanitation Program.³⁷

D. Future Studies and Directives

Future studies and directives mandated by S.L. 2019-37 include: the development of SEAs, potential SEAs in moratorium areas, and a Pamlico Sound Shellfish Aquaculture Pilot Project for a few larger-size leases. These studies require the development and implementation of new methods and procedures for the shellfish lease process. DMF is currently exploring possible ways to complete large-scale shellfish lease investigations required by both the SEA and Pamlico Sound Pilot studies.

Currently, a large-scale shellfish lease investigation would require the effort of the entire Shellfish Lease Program staff for approximately three months leaving no time to review lease applications or perform other work of the program. DMF is exploring the use of drone technology to aid in the lease investigation process and exploring Habitat Suitability Index modeling as a tool for siting shellfish aquaculture leases. DMF is also evaluating various sampling techniques including dredge sampling and using the spatial analysis from the Bogue Sound Pilot Project.

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³⁶ http://www.ct.gov/deep/cwp/view.asp?a=2705&q=431902&depNav_GID=1622; https://www.freshfromflorida.com/Divisions-Offices/Aquaculture; https://www.maine.gov/dmr/aquaculture; http://dnr.maryland.gov/fisheries/pages/aquaculture/index.aspx https://www.capecodextension.org/marine/semac/; https://www.nj.gov/dep/fgw/pdf/marine/shellfish_leasing_policy_atlantic.pdf; http://assembly.state.ny.us/leg/?default_fld=&bn=A07120&term=2011&Summary=Y&Actions=Y&Votes=Y&Memo=Y&Text=Y http://www.shellfishri.com/ri-shellfish-initiative/; http://www.mrc.state.va.us/Shellfish_Aquaculture.shtm
³⁷ Id.

IV. Recommendations

A multifaceted approach is required to address user conflict issues related to shellfish aquaculture leases in North Carolina. This approach envisions regulatory reform, program evaluation, collaboration, and resource assessment. Previous and current work should be built upon to avoid duplication and expending extra resources.

Existing shellfish lease and franchise statutes³⁸ and rules³⁹ require revisions to effect execution of the recommendations in this study. DMF is drafting suggested revisions to existing shellfish lease statutes and rules to address user conflict issues and incorporate mandated revisions from S.L. 2019-37. The deadline for adoption of rule revisions is March 1, 2021. In discussions with DCM and the North Carolina Coastal Resources Commission ("CRC") regarding potential user conflict concerns specific to shellfish lease gear and navigation impacts, DMF intends to develop rule language to address these concerns. Recommendations will be made regarding rule revisions based off the findings in this study. Additional recommendations for statute and rule revisions addressing user conflict issues will be developed through the additional studies and directives mandated by S.L. 2019-37.

DMF will evaluate the Shellfish Lease Program and Aquaculture Permitting Program to identify challenges and inefficiencies and recommend ways to improve existing programs. DMF staff believes this focus will result in further modification of internal operating procedures. Areas for further collaboration were identified in this study along with likely participating partners.

Other directives mandated by S.L. 2019-37 include the development and implementation of SEAs similar to those employed by other states. One of the obstacles North Carolina shellfish regulators face is a limited ability to stay informed regarding the aquaculture efforts of other states. DMF recommends collaborating with other states to facilitate a joint interstate discussion. This effort will be of mutual benefit to participating states in compiling and evaluating information relevant to each states' respective aquaculture regulation and permitting processes.

The Shellfish Lease Program is tasked with implementing the recommendations from this study. It is imperative that DMF have sufficient dedicated staff to manage the program. DMF may not be adequately funded or staffed to implement the recommendations in this study. The lack of funding and dedicated staff significantly inhibits the program's administrative support for lease holders, drastically increases the

Fiscal Impact Analysis of Proposed Rules 15A NCAC 03K .0111, 03O .0203, .0205-.0211

³⁸ N.C.G.S. § 113-201 et seq.

^{39 15}A NCAC 03O.0201.0211

time to acquire a lease, and impairs the DMF's ability to address user conflict issues efficiently and effectively. The additional legislative mandates put further burden on the already limited amount of staff and resources of the Shellfish Lease Program. DMF will evaluate current staff and funding levels of the Shellfish Lease Program to estimate the resources needed for the program to implement the recommendations of this study.

A. Recommendation #1: Regulatory Reform

- Incorporate riparian area owner notification standards to include certified mail notification (15A NCAC 03O.0201);
- Add language to include MFC's authority to limit total acres leased in a waterbody (15A NCAC 03O.0201);
- Add a 250 feet setback requirement between any shellfish leases (15A NCAC 03O.0201(a));
- Modify the setback requirement of 100 feet from a developed shoreline to 250 feet to help alleviate user conflict with riparian owners (15A NCAC 03O.0201(a)(3));
- Modify marking requirements for shellfish leases and franchises to include a maximum of eight corner lease corner markers and additional requirements to ensure visibility to alleviate navigation concerns. More noticeable shellfish lease markings have been a safety concern (15A NCAC 03O.0202(b); 15A NCAC 03O.0204);
- Modify training requirements for shellfish lease applicants to include information about user conflicts and the public trust (15A NCAC 03O.0202(d));
- Add administrative remedy language from statute (15A NCAC 03O.0206);
- Add clearance requirement of three feet between the top of the cage and the water level at mean low tide to the amended shellfish leasing statute allowing the use of gear up to 18 inches off of the bottom (N.C.G.S. § 113-202(r)).

B. Recommendation #2: Program Evaluation

- Best management practices for the industry should be practiced and publicized, best available science should be incorporated into the permitting process, and stakeholders should work together to collect data and analyze facts to reach shared decisions on the user conflict issues;
- Synchronize all reporting and renewal requirements for shellfish leases and aquaculture permits.

C. Recommendation #3: Collaboration

- Form an interstate aquaculture workgroup and have an in-person meeting;
- Create an inventory with aquaculture information from each state, including site selection, permitting, public trust issues, business planning and economics, seed and nursery options, grow out methods and equipment, consumer safety and marketing;
- Develop a standing interstate aquaculture workgroup in partnership with NCSG with adequate funding and support;
- In partnership with NCSG, continue developing a Shellfish Aquaculture Training Program.

D. Recommendation #4: Resource Assessment

• Evaluate the Shellfish Lease Program's staff and funding levels to determine whether they are adequate to administer the current and increasing volume and complexity to similar levels of other state's aquaculture programs.