

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF FISH AND WILDLIFE

Statutory Authority: 7 Delaware Code, Sections 2002, 2005(a), 2006(d & e)
(7 Del.C. §§2002, 2005(a), 2006(d & e))

FINAL

Secretary's Order No.: 2014-F-0013

3801 Shellfish Aquaculture

Date of Issuance: July 15, 2014

Effective Date of the Amendment: August 11, 2014

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") the following findings, reasons and conclusions are entered as an Order of the Secretary in the above-referenced rulemaking proceeding.

Background and Procedural History

This Order considers proposed *revised* new regulations, to wit: 7 DE Admin. Code 3801, *Shellfish Aquaculture*. The Department's Division of Fish and Wildlife commenced the regulatory development process with Start Action Notice 2014-04. The Department published its initial proposed new regulation in the May 1, 2014 Delaware *Register of Regulations*, and held a public hearing on May 21, 2014.

These new regulations provide for a shellfish aquaculture industry in Delaware's Inland Bays that is compatible with commercial and recreational finfishing and shellfishing, boating navigation and public safety, public water access and use, and native biota. Specifically, these proposed new regulations provide a structured process and set conditions for leasing of subaqueous bottom within Delaware's Inland Bays for the culture of bivalve shellfish.

With regard to the requirements for said leasing, the regulations proposed include considerations for application, location, issuance, marking, renewal, transfer, expiration, termination, condemnation, and emergency relocation. Additionally, said regulations further propose measures related to shellfish aquaculture gear and marking, shellfish nursery permitting and structures, harvester license qualifications, bivalve species authorized for aquaculture, activities within subaqueous lease areas, and shellfish aquaculture reporting requirements.

The aforementioned regulations were developed by the Department with significant stakeholder input, beginning in 2012 with the establishment of the Center for the Inland Bays Tiger Team. This Tiger Team was comprised of multiple stakeholders and interests, including (but certainly not limited to) staff members from the Center for the Inland Bays, aquaculture interests, commercial clamming interests, recreational interests, representatives from the University of Delaware Sea Grant Program, the Sussex County Economic Development Office, the Shellfish Advisory Council, and the Department's Divisions of Water, Watershed Stewardship, and Fish and Wildlife. Between May 1, 2012 and February 2013, the Tiger Team convened ten public meetings and two information gathering meetings, all culminating in a final report which was presented before the Advisory Council of Shellfisheries on March 28, 2013. The Department also met with the U.S. Army Corp of Engineers ("USACE") during the course of the regulatory development process, in order to streamline the permitting process and to determine exactly what would be required of Applicants seeking to lease subaqueous bottom within Delaware's Inland Bays for the culture of bivalve shellfish.

The Department has recognized throughout the development of these proposed new regulations that there are numerous different perspectives on the issue of establishing shellfish aquaculture here in Delaware, and all such input was highly valued and taken into consideration during the regulatory development process. It should also be noted, however, that the decision to establish shellfish aquaculture in Delaware's Inland Bays was made by the passage of House Bill 160 by the 147th General Assembly. The purpose of these proposed new regulations is to implement the intent of House Bill 160 by creating an aquaculture industry in Delaware that provides jobs and economic benefits to the citizens of this state, while potentially reducing nutrients in the Inland Bays. At the same time, these proposed new regulations also serve to ensure the compatibility with Delaware's boating and fishing uses of the Inland Bays, while enabling the Department to protect and to sustain Delaware's native species, including its robust hard clam population.

The Department has the statutory basis and legal authority to act with regard to these aforementioned proposed new regulations, pursuant to 7 Del.C. §§2002, 2005(a), 2006(d & e), and 7 Del.C., Chapter 60. Public comment was received by the Department regarding this proposed promulgation, and the same was thoroughly addressed and responded to by the Division of Fish & Wildlife in its formal Technical Response Memorandum dated July 7, 2014. Proper notice of the hearing was provided as required by law.

The Department's presiding hearing officer, Lisa A. Vest, prepared a Hearing Officer's Report, dated July 10, 2014

("Report"), which recommends certain findings and the adoption of the proposed *revised* regulations, as attached to the Report as Appendix A.

Findings and Discussion

As noted previously, House Bill 160 provided the Department the authority to promulgate these proposed new regulations regarding shellfish aquaculture in Delaware's Inland Bays. The Department stressed in its presentation at the hearing that the purpose of these proposed regulations is to support an *industry* of shellfish aquaculture in Delaware. It is *not* to establish shellfish aquaculture and leasing for speculation, nor for a personal hobby.

That being said, House Bill 160 also provided the Department with some constraints to work within, including (but not limited to) that leases must be compatible with both commercial and recreational finfishing and shellfishing, boating navigation and safety, public water access and use, and native biota. Additionally, the legislation required that shellfish aquaculture be conducted in a manner to prevent and control the spread of shellfish borne diseases among both shellfish aquaculture products and wild shellfish, and that shellfish aquaculture must provide for the conservation, preservation, and improvement of the wild shellfish resources of the Inland Bays. Furthermore, leases must not, in both Rehoboth Bay and Indian River Bay, exceed 5% of their respective total subaqueous lands, and 10% for the Little Assawoman Bay.

Some of the points that were considered within the legislation passed by the 147th General Assembly were that leases must be issued in one-acre increments, must generally be rectangular, and that leases must initially be issued by lottery and subsequently on a first-come, first-served basis thereafter. Fees and renewals were also established by the legislation, as were the penalties for violations of both the Delaware Code and the Department's regulations.

Throughout the regulatory development process regarding this particular promulgation, the Department received numerous public comments, as noted in the Report. After the hearing record closed with respect to public comment on June 5, 2014, an exhaustive review of the same was undertaken by the Department's Division of Fish & Wildlife. This comprehensive review subsequently yielded a formal Technical Response Memorandum, dated July 7, 2014, which the Hearing Officer then expressly incorporated into her Report.

The aforementioned Technical Response Memorandum addressed the full range of comment contained in the record concerning this matter. Each comment was meticulously organized and grouped according to its subject matter, followed by a thorough and rational discussion of the issue based upon the record developed in this promulgation. Following the discussion of each subject matter, the Division of Fish & Wildlife offered its recommendation as to what the position of the Department should be with respect to each issue. In most instances, the Division believed that no changes to the Department's proposed amendments were warranted. There were, however, two specific instances where the Division proposed to *revise* the wording as set forth in its initial proposed regulation, to wit: (1) minor revisions to Section 3.1.5 were necessary following conversations with the USACE, to provide additional clarity and correct clerical error; and (2) additional language was added to Section 14.2 to allow greater flexibility in lease marking and to provide clarification of the same, in consideration of the public comment received in this matter.

I find that the Department's experts in the Division of Fish and Wildlife fully developed the record to support adoption of these *revised* proposed regulations. I find that the *revised* proposed regulations are well-supported by the record developed by the Department, and I adopt the Report to the extent it is consistent with this Order. I also find that the proposed *revisions* to the Department's new regulation, to wit: **7 DE Admin. Code 3801, Shellfish Aquaculture**, are not substantive in nature, and thus no additional vetting of these proposed regulatory amendments is necessary at this time.

With the adoption of this Order, Delaware will be enabled to implement the intent of House Bill 160 by creating an aquaculture industry here in Delaware that provides jobs and economic benefits to the citizens of this state, while potentially reducing nutrients in the Inland Bays. At the same time, these proposed new regulations also serve to ensure the compatibility with Delaware's boating and fishing uses of the Inland Bays, while enabling the Department to protect and to sustain Delaware's native species, including its robust hard clam population.

In conclusion, the following findings and conclusions are entered:

- 1.) The Department has jurisdiction under its statutory authority to issue an Order adopting these *revised* proposed new regulations as final;
- 2.) The Department provided adequate public notice of the proposed new regulations, and provided the public with an adequate opportunity to comment on the same, including at the public hearing held on May 21, 2014;
- 3.) The Department held a public hearing on May 21, 2014 in order to consider public comment before making any final decision;
- 4.) The Department's Hearing Officer's Report, including its recommended record and the recommended *revised* new regulations as set forth in Appendix A, and the Technical Response Memorandum as set forth in Appendix B, are adopted to provide additional reasons and findings for this Order;
- 5.) The recommended *revised* new regulations should be adopted as final new regulations because Delaware will be able to (1) provide for a shellfish aquaculture industry in Delaware's Inland Bays that is compatible with commercial and recreational finfishing and shellfishing, boating navigation and public safety, public water access and use; (2) provide a structured process and set conditions for leasing of subaqueous bottom within

Delaware's Inland Bays for the culture of bivalve shellfish; and, lastly, because (3) the *revised* new regulations are well supported by documents in the record;

- 6.) The Department shall submit this Order approving the final new regulation to the *Delaware Register of Regulations* for publication in its next available issue, and provide such other notice as the law and regulation require and the Department determines is appropriate.

David S. Small, Secretary

3801 Shellfish Aquaculture

1.0 Introduction

These regulations provide for a shellfish aquaculture industry in Delaware's Inland Bays that is compatible with commercial and recreational finfishing and shellfishing, boating navigation and public safety, public water access and use, and native biota. Specifically, the regulations provide a structured process and set conditions for leasing of subaqueous bottom within Delaware's Inland Bays for the culture of bivalve shellfish. The regulations include requirements for lease: application, locations, issuance, marking, renewal, transfer, expiration, termination, condemnation and emergency relocation. The regulations further propose measures related to: shellfish aquaculture gear and marking, shellfish nursery permitting and structures, harvester license qualifications, bivalve species authorized for aquaculture, activities within subaqueous lease areas, and shellfish aquaculture reporting requirements.

2.0 Definitions

The following words and terms, when used in this regulation, have the following meaning unless the context clearly indicates otherwise:

"Aquaculture activities" means those activities which include the purchase, monitoring, planting, sale, possession, harvest, production, breeding, transportation, and processing of shellfish.

"Culture" means to cultivate bivalve shellfish at any life stage.

"Farm gate" means the dollar value paid for a cultivated product upon harvest.

"Lessee" or "leaseholder" means that person, persons, or entity, lawfully granted a Shellfish Aquaculture Subaqueous Land Lease in Delaware's Inland Bays.

"Navigation corridor" means the 20-foot tract of subaqueous land that is established between two adjacent one (1) acre shellfish aquaculture leases.

"Non-Shellfish Aquaculture Development Area" or "Non-SADA" means that area of Delaware's Inland Bays outside of the boundaries of the SADA designated by the Department for the purpose of shellfish aquaculture.

"Shellfish Aquaculture Development Area" or "SADA" means those areas of Delaware's Inland Bays designated by the Department for the purpose of shellfish aquaculture. These distinct areas are named and their corner coordinates described for the Inland Bays as follows:

Rehoboth Bay

RB-A 38°39'24.0983"N, 075°04'42.58199"W and 38°39'17.11895"N, 075°04'42.61481"W and 38°39'17.11061"N, 075°04'39.73191"W and 38°39'12.78715"N, 075°04'39.75229"W and 38°39'12.79550"N, 075°04'42.6351"W and 38°39'06.01377"N, 075°04'42.66701"W and 38°39'06.02967"N, 075°04'48.18045"W and 38°39'10.55082"N, 075°04'48.15929"W and 38°39'10.58385"N, 075°04'59.69059"W and 38°39'15.10500"N, 075°04'59.66963"W and 38°39'15.12139"N, 075°05'05.43538"W and 38°39'23.96600"N, 075°05'05.39457"W and 38°39'23.94138"N, 075°04'56.74566"W and 38°39'42.02597"N, 075°04'56.66160"W and 38°39'41.94333"N, 075°04'28.08202"W and 38°39'30.83816"N, 075°04'28.13487"W and 38°39'30.85499"N, 075°04'33.90096"W and 38°39'28.59442"N, 075°04'33.91166"W and 38°39'28.61117"N, 075°04'39.67771"W and 38°39'24.09002"N, 075°04'39.69902"W.

RB-B 38°38'58.38782"N, 075°07'50.24403"W and 38°39'02.71130"N, 075°07'50.22684"W and 38°39'02.69716"N, 075°07'44.46135"W and 38°39'04.95775"N, 075°07'44.45231"W and 38°39'04.95065"N, 075°07'41.56953"W and 38°39'07.21124"N, 075°07'41.56047"W and 38°39'07.19761"N, 075°07'36.04698"W and 38°38'56.09237"N, 075°07'36.09174"W and 38°38'56.11310"N, 075°07'44.48767"W and 38°38'58.37369"N, 075°07'44.47863"W.

RB-C 38°38'53.28583"N, 075°05'04.59609"W and 38°38'53.26192"N, 075°04'56.20029"W and 38°38'46.67787"N, 075°04'56.23089"W and 38°38'46.68610"N, 075°04'59.11345"W and 38°38'37.44610"N, 075°04'59.15628"W and 38°38'37.43787"N, 075°04'56.27383"W and 38°38'30.85382"N, 075°04'56.30442"W and 38°38'30.86205"N, 075°04'59.18680"W and 38°38'26.34089"N, 075°04'59.20776"W and 38°38'26.34909"N, 075°05'02.09010"W and

38°38'17.10907"N, 075°05'02.13282"W and 38°38'17.10087"N, 075°04'59.25059"W and 38°38'14.84028"N, 075°04'59.26106"W and 38°38'14.83206"N, 075°04'56.37886"W and 38°38'05.98742"N, 075°04'56.41995"W and 38°38'06.00314"N, 075°05'01.93211"W and 38°38'12.78489"N, 075°05'01.90075"W and 38°38'12.80939"N, 075°05'10.54730"W and 38°38'41.99926"N, 075°05'10.41327"W and 38°38'41.98294"N, 075°05'04.64826"W.

Indian River Bay

IR-A 38°35'20.40778"N, 075°10'28.80060"W and 38°34'57.99926"N, 075°10'28.87580"W and 38°34'58.03995"N, 075°10'48.78422"W and 38°35'00.30057"N, 075°10'48.77681"W and 38°35'00.31217"N, 075°10'54.53694"W and 38°35'07.09404"N, 075°10'54.51485"W and 38°35'07.11126"N, 075°11'03.13978"W and 38°35'13.69546"N, 075°11'03.13405"W and 38°35'13.66661"N, 075°10'48.73298"W and 38°35'20.44847"N, 075°10'48.71073"W.

IR-B 38°35'00.26136"N, 075°04'02.56002"W and 38°34'49.15605"N, 075°04'02.61381"W and 38°34'49.16463"N, 075°04'05.49372"W and 38°34'46.90403"N, 075°04'05.50465"W and 38°34'46.92040"N, 075°04'11.01257"W and 38°34'49.18100"N, 075°04'11.00170"W and 38°34'49.18952"N, 075°04'13.88161"W and 38°34'51.45012"N, 075°04'13.87076"W and 38°34'51.45863"N, 075°04'16.75070"W and 38°34'58.04274"N, 075°04'16.71917"W and 38°34'58.02571"N, 075°04'10.95914"W and 38°35'00.28631"N, 075°04'10.94827"W.

Little Assawoman Bay

LA-B 38°28'45.39471"N, 075°03'31.72841"W and 38°28'45.42021"N, 075°03'40.10457"W and 38°29'19.13206"N, 075°03'39.93894"W and 38°29'19.12332"N, 075°03'37.06268"W and 38°29'23.64459"N, 075°03'37.04041"W and 38°29'23.61901"N, 075°03'28.66303"W and 38°29'16.83711"N, 075°03'28.69665"W and 38°29'16.81946"N, 075°03'22.94418"W and 38°29'01.19271"N, 075°03'23.02199"W and 38°29'01.21916"N, 075°03'31.65017"W.

LA-C 38°28'33.59037"N, 075°03'29.66689"W and 38°28'33.55579"N, 075°03'18.41536"W and 38°28'22.45029"N, 075°03'18.47082"W and 38°28'22.48487"N, 075°03'29.72187"W.

LA-D 38°28'15.47068"N, 075°03'18.50567"W and 38°28'04.36517"N, 075°03'18.56112"W and 38°28'04.40853"N, 075°03'32.68683"W and 38°28'15.51403"N, 075°03'32.63198"W.

"Shellfish aquaculture gear" means any cage, rack, tray, or other similar device for holding and protecting oysters or clams, including any bags, containers, nets, or floating container.

"Shellfish Nursery Structures" means any structure or container, such as an upweller, downweller or raceway in Delaware's Inland Bays used to culture 1,000 or more bivalve shellfish at one physical address, and not located in a lawful Shellfish Aquaculture Subaqueous Land Lease.

"Submerged aquatic vegetation" or "SAV" means any rooted, vascular submerged plants.

3.0 Shellfish Aquaculture Subaqueous Land Lease Issuance

- 3.1 The Department shall not issue a shellfish aquaculture land lease within the boundaries of a SADA without:
 - 3.1.1 a complete and accepted SADA Shellfish Aquaculture Subaqueous Land Lease Application;
 - 3.1.2 required field assessments of each proposed one-acre plot indicating a mean density of less than two (2) hard clams per square yard per acre;
 - 3.1.3 evidence of the required performance bond;
 - 3.1.4 evidence of the required liability coverage;
 - 3.1.5 [a joint Department and an] Army Corps of Engineers permit [application]; and
 - 3.1.6 full payment of all application and lease fees.
- 3.2 The Department shall not issue a Shellfish Aquaculture Subaqueous Land Lease for areas extending beyond or entirely outside the boundaries of a SADA without:
 - 3.2.1 a complete and accepted Non-SADA Shellfish Aquaculture Subaqueous Land Lease Application;
 - 3.2.2 required field assessments of each proposed one-acre plot indicating a mean density of less than two (2) hard clams per square yard per acre;
 - 3.2.3 consideration of public comment;
 - 3.2.4 all required state and federal permits;
 - 3.2.5 evidence of the required performance bond;
 - 3.2.6 evidence of the required liability coverage;
 - 3.2.7 evidence that the proposed lease boundaries are at least 150 feet from existing marked navigational channels; and
 - 3.2.8 full payment of all application and lease fees.

- 3.3 The Department shall not issue a Shellfish Aquaculture Subaqueous Land Lease to persons under 18 years of age.
- 3.4 Applicants denied leases may contest the Department's decision by requesting a review by the Environmental Appeals Board, to be filed no later than 30 days after the Department's written denial of lease.

4.0 SADA Shellfish Aquaculture Subaqueous Land Lease Application

- 4.1 The components of a SADA Shellfish Aquaculture Subaqueous Land Lease Application must include and fully address subsections 4.2 through 4.4.
- 4.2 A complete and accurate Shellfish Aquaculture Subaqueous Land Lease Application form.
- 4.3 A complete and accurate operations plan:
 - 4.3.1 An operations plan shall include a complete and accurate description of the location and size of the proposed lease area.
 - 4.3.2 An operations plan shall identify the species being managed or cultivated within the proposed lease area and over which the applicant shall have exclusive right to culture bivalve shellfish over the term of the lease.
 - 4.3.3 An operations plan shall provide a complete and accurate description of the method and manner of management or cultivation to be performed within the proposed lease area.
 - 4.3.4 An operations plan shall provide a complete and accurate description of gear to be used within the proposed lease area and include a schematic of the overhead view and cross-sectional elevation view of the gear and mooring equipment being deployed within the proposed lease area.
 - 4.3.5 An operations plan shall address compatibility of the proposed operation with other existing uses to include navigation, recreation and fisheries, as well as compatibility with existing Shellfish Aquaculture Subaqueous Land Leases adjacent to the proposed lease area.
 - 4.3.6 An operations plan shall completely and accurately identify the safety and security equipment used on the lease, including appropriate markings of the equipment and lease boundaries.
- 4.4 A complete and accurate shellfish aquaculture business plan.
 - 4.4.1 A shellfish aquaculture business plan shall include a timeline indicating anticipated planting of shellfish stock, tending and grow-out period, and the anticipated time of harvest.
 - 4.4.2 A shellfish aquaculture business plan shall include the anticipated cost of shellfish stock by species, a full description of shellfish aquaculture equipment, and a full description of any off-lease facilities that might be used.
 - 4.4.3 A shellfish aquaculture business plan shall demonstrate that sufficient financial resources are available to operate and maintain all aspects of the proposed aquaculture activities. Any one (1) of the following are acceptable submissions for assessing financial capabilities:
 - 4.4.3.1 A letter from a financial institution or funding agency showing intent or willingness to commit a specified amount of funding to support the proposed aquaculture activities.
 - 4.4.3.2 The most recent corporate annual financial report and supporting documents indicating sufficient funds to finance the proposed aquaculture activities.
 - 4.4.3.3 Copies of bank statements or other evidence indicating availability of unencumbered funds.
 - 4.4.3.4 Proof that equipment or shellfish stock are available to the applicant to support the proposed aquaculture activities.
 - 4.4.4 A shellfish aquaculture business plan shall include a resume or other documentation as evidence of technical expertise and capability to accomplish the proposed project.
- 4.5 The Department may not release or make public any shellfish aquaculture business plan financial information submitted to the Department for application review, except in aggregate or summary form which does not directly or indirectly disclose the business of any person who submits such information, or as provided by court order.
- 4.6 The Department shall evaluate the SADA Shellfish Aquaculture Subaqueous Land Lease Application.
 - 4.6.1 Upon acceptance of a complete SADA Shellfish Aquaculture Subaqueous Land Lease Application, the Department shall perform a field assessment of the proposed lease site.
 - 4.6.2 The Department shall provide the basis for rejection of a SADA Shellfish Aquaculture Subaqueous Land Lease Application in writing.

5.0 Non-SADA Subaqueous Land Lease Application

- 5.1 The Department shall consider lease applications for subaqueous lands situated wholly or partially beyond the boundaries of a SADA; however, the applicant bears the burden and full monetary responsibility for

demonstrating to the Department's satisfaction that the proposed activities on the subaqueous lands applied for are compatible with commercial and recreational fishing, boating navigation and safety, public water access and use, and native biota.

5.2 The components of a Non-SADA Shellfish Aquaculture Subaqueous Land Lease Application shall include and fully address subsections 5.2.1 through 5.2.4.

5.2.1 A complete and accurate Shellfish Aquaculture Subaqueous Land Lease Application form.

5.2.2 A complete and accurate operations plan according to the criteria identified under subsection 4.3.

5.2.3 A complete and accurate shellfish aquaculture business plan according to the criteria identified under subsection 4.4.

5.2.4 A complete and accurate Non-SADA Supplemental Materials Attachment which shall include:

5.2.4.1 A map or nautical chart depicting the boundaries of the proposed lease, associated depths at mean low water, and coordinates (latitude and longitude dd/mm/ss.ss) for the proposed lease corners.

5.2.4.1.1 Proposed Non-SADA lease boundaries must be designed as individual square one-acre plots.

5.2.4.1.2 Proposed Non-SADA leases greater than one acre must reflect a 20 foot navigation channel between adjacent square one-acre parcels.

5.2.4.2 A full description of the proximity of the proposed lease area to any marked or maintained navigation channels and the nearest shoreline.

5.2.4.3 The names and addresses of riparian land owners whose property is within 150 feet of the proposed lease area.

5.2.4.4 A full description of the proximity of the proposed lease site to submerged aquatic vegetation (SAV), including a description and estimate of coverage of any SAV within the boundaries of the proposed lease.

5.2.4.5 A full description of the proximity of the lease site to any prohibited, conditionally approved, or seasonally approved Shellfish Growing Areas, as classified by Delaware Shellfish and Recreational Water Programs.

5.2.4.6 A written assessment of existing recreational and commercial uses of the proposed lease area.

5.2.5 The Department shall evaluate the Non-SADA Shellfish Aquaculture Subaqueous Land Lease Application.

5.2.5.1 Upon acceptance of a complete Non-SADA Shellfish Aquaculture Subaqueous Land Lease Application, the Department shall perform a field assessment of the proposed lease site.

5.2.5.2 The Department shall provide the basis for rejection of a Non-SADA Shellfish Aquaculture Subaqueous Land Lease Application to the applicant in writing.

5.2.6 A copy of a lawfully issued U.S. Army Corps of Engineers permit authorizing shellfish aquaculture activities within the boundaries of the proposed lease site is required to be submitted to the Department before an aquaculture lease will be issued.

5.2.7 A copy of a lawfully issued Delaware Wetlands and Subaqueous Lands Lease authorizing shellfish aquaculture activities within the boundaries of the proposed lease site is required to be submitted to the Department before an aquaculture lease will be issued.

6.0 Shellfish Aquaculture Subaqueous Land Lease Application Field Assessment

6.1 Upon the Department's acceptance of a complete SADA or Non-SADA Shellfish Aquaculture Subaqueous Land Lease Application, the Department shall perform a field evaluation of the naturally occurring hard clam resource within any proposed lease area outside of Little Assawoman Bay.

6.2 The Department shall prepare a written summary of their methods and findings of their field assessment for the applicant.

6.2.1 The Department shall not issue a Shellfish Aquaculture Subaqueous Land Lease for any acreage where the Department determines the presence of a mean density of two (2) or more hard clams per square yard per acre.

6.2.1.1 The Department may remove, for an indefinite period, any potential lease area where the Department determines the presence of a mean density of two (2) or more hard clams per square yard per acre.

6.3 The Department may issue a SADA Shellfish Aquaculture Subaqueous Land Lease where the Department determines that there is a mean density of less than two (2) hard clams per square yard per acre.

6.4 The Department may issue a Non-SADA Shellfish Aquaculture Subaqueous Land Lease where the Department determines that the mean density of clams is less than two (2) hard clams per square yard per acre.

- 6.5 Applicants may modify a proposed lease area(s) within a SADA and their operations plan without an additional application fee for acreage where the Department has determined that mean density of two (2) or more hard clams per square yard per acre exist, provided the total acreage accounted for in the modified application does not exceed the total acreage of the initial application and provided the proposed modification occurs within one (1) year of the date of written field assessment findings.

7.0 Shellfish Aquaculture Bonds and Liability

- 7.1 Prior to obtaining a SADA Shellfish Aquaculture Subaqueous Land Lease, or a Non-SADA Shellfish Aquaculture Subaqueous Land Lease, the prospective leaseholder shall provide evidence of, and maintain for the duration of the lease, a performance bond of \$2,000 per acre leased, to provide for aquaculture equipment removal cost-recovery in the event that the prospective leaseholder fails to perform according to the conditions of the lease, or fails to maintain the lease.
- 7.2 Prior to obtaining a SADA Shellfish Aquaculture Subaqueous Land Lease or a Non-SADA Shellfish Aquaculture Subaqueous Land Lease, the prospective leaseholder shall provide evidence of, and maintain for the duration of the lease, liability insurance of at least \$1 million each occurrence and \$2 million annual aggregate against loss or liability for bodily injury, death, property damage or destruction occurring within the leased area, or arising out of the use of the lease by the leaseholder or its agents, employees, officers, and visitors. Said policy shall be written so as to provide that the insurer waives all rights of subrogation against the State in connection with any loss or damage covered by the policy.

8.0 Modifications to Operations Plan

- 8.1 Proposed modifications to an operations plan may be made at any time and shall be submitted to the Department in written form by the leaseholder or a party lawfully authorized to act on behalf of the leaseholder.
- 8.2 An approved operations plan will remain in effect until it is terminated, amended, or otherwise changed by the leaseholder or a party lawfully authorized to act on behalf of the leaseholder and said modifications are approved in writing by the Department.

9.0 Shellfish Nursery Permits and Nursery Structures

- 9.1 It is unlawful to operate any upweller, downweller or raceway in or on Delaware's Inland Bays without a Department-issued Shellfish Nursery Permit. (Penalty Section 7 Del.C. §2012)
- 9.2 A Shellfish Nursery Permit:
- 9.2.1 Requires an approved lease issued by the Department's Wetlands & Subaqueous Lands Section for each shellfish nursery structure.
- 9.2.2 A complete and accurate operations plan:
- 9.2.2.1 An operations plan shall include a complete and accurate description of the location and size of the proposed shellfish nursery structures and area.
- 9.2.2.2 An operations plan shall identify which species are being cultivated in the shellfish nursery structures.
- 9.2.2.3 An operations plan shall provide a complete and accurate description of the method and manner of management or cultivation to be performed within the proposed shellfish nursery structures.
- 9.2.3 May not be transferred.
- 9.3 The Department may revoke or suspend a Shellfish Nursery Permit at any time for any violation of Sections 12.0 or 17.0.
- 9.4 Permitted Shellfish Nurseries may be located in waters classified by Delaware Shellfish and Recreational Water Programs as approved, seasonally approved, or prohibited.
- 9.5 It is unlawful for shellfish nursery structures to contain any oysters greater than 25 mm shell length or any hard clams greater than 15 mm shell length without written authorization from the Department.
- 9.6 The shellfish nursery permittee shall:
- 9.6.1 Follow the requirements of Delaware Shellfish and Recreational Water Programs.
- 9.6.2 Notify the Department immediately upon discovery of any disease or mass mortality event affecting the shellfish at the facility that has the potential to contaminate native or naturalized animals.

10.0 Shellfish Aquaculture Harvester License

- 10.1 The Department will provide a shellfish aquaculture harvester license to each shellfish aquaculture leaseholder upon issuance of the aquaculture lease by the Department and full payment of all lease and license fees to the Department.

- 10.2 The Department may issue shellfish aquaculture harvester licenses only to individuals aged 16 years and older.
- 10.3 A shellfish aquaculture harvester license is not transferrable.
- 10.4 It is unlawful for any leaseholder, or licensed shellfish aquaculture harvester, or persons working in the physical presence of a shellfish aquaculture license holder, to engage in shellfish aquaculture activities that are inconsistent with Delaware Shellfish and Recreational Water Programs regulations. (Penalty Section 7 Del.C. §2012 and §2013(d))

11.0 Shellfish Aquaculture Gear

- 11.1 A Shellfish Aquaculture Subaqueous Land Leaseholder shall bear the burden and responsibility for properly marking, rigging, and maintaining all shellfish aquaculture gear.
- 11.2 It is unlawful for the aquaculture lessee to not conspicuously, legibly and permanently mark the lease number on all equipment, gear, or manmade materials placed on an aquaculture lease site.
- 11.3 It is unlawful to use any equipment or gear that is known to leach toxic materials or violate any water quality standards on a Shellfish Aquaculture Subaqueous Land Lease.
- 11.4 It is unlawful for any gear containing oysters to hold the oysters closer than four inches from the bottom.
- 11.5 It is unlawful for the aquaculture lessee to not mark each shellfish aquaculture container with an all-white buoy measuring at least three (3) inches by three (3) inches by three (3) inches.
- 11.6 Notwithstanding subsection 11.5, shellfish aquaculture containers stacked vertically in the water column shall be marked with a single all-white buoy measuring at least three (3) inches by three (3) inches by three (3) inches, per vertical stack.
- 11.7 It is unlawful for buoys marking shellfish aquaculture containers to not have the leaseholder's lease number either on the buoy, or on a waterproof tag attached to the buoy.
- 11.8 It is unlawful for an individual gear or shellfish aquaculture container to exceed 70 cubic feet in volume.
- 11.9 It is unlawful to store equipment, materials, or any shellfish gear that do not contain live shellfish within the boundaries of a Shellfish Aquaculture Subaqueous Land Lease site.
- 11.10 It is unlawful to clean, maintain or repair, except by hand tools operated without electric or hydraulic power, any shellfish aquaculture gear while it remains fully or partially submerged in the water.
- 11.11 It is unlawful to rinse or clean any shellfish aquaculture gear while on the water, except within the boundaries of one's own lease site.
- 11.12 The leaseholder is responsible for all equipment, gear, cultured shellfish, or materials placed on the lease site for aquaculture purposes, and remains responsible for gear that has been found adrift or unattended outside the boundaries of the lease.
(Penalty Section 7 Del.C. §2012)

12.0 Importation of Shellfish for Shellfish Aquaculture

- 12.1 It is unlawful to collect wild stock shellfish for the purposes of shellfish aquaculture from Delaware waters, except as authorized in writing by the Department.
- 12.2 It is unlawful to possess, place, or cause to be placed, undersized wild stock shellfish except as authorized in writing by the Department.
- 12.3 It is unlawful for a person to import or possess shellfish from outside of the State, for the purpose of shellfish aquaculture, without first obtaining a permit from the Department.
(Penalty Section 7 Del.C. §2012)

13.0 Shellfish Aquaculture Species

- 13.1 It is unlawful to produce or culture bivalve shellfish species other than *Crassostrea virginica*, the eastern oyster, in Rehoboth Bay, Indian River and Indian River Bay and their respective tidal tributaries.
- 13.2 It is unlawful to produce or culture bivalve shellfish species other than *Crassostrea virginica*, the eastern oyster, and *Mercenaria mercenaria*, the hard clam, in Little Assawoman Bay and its tidal tributaries.
(Penalty Section 7 Del.C. §2012)

14.0 Lease Marking

- 14.1 Following the issuance of a Shellfish Aquaculture Subaqueous Land Lease by the Department, and prior to placing any shellfish aquaculture gear or shellfish, each corner of each leased one (1) acre plot must be surveyed and marked by a professional land surveyor as defined in 24 Del.C. §2702(6), or may be surveyed and marked by the Department as resources allow.
- 14.1.1 The relative accuracy of the corner marker locations shall be equal to or less than three (3) feet. Locations of all corner markers in latitude and longitude shall be provided in an eight (8) digit format, as well as

information on the method of measurement, make and model of equipment, on a certificate form supplied by the Department and signed by the professional surveyor or Department surveyor after the boundary survey and marking of the lease.

- 14.1.2 The leaseholder shall be responsible for supplying the anchors, lines, buoys, and poles required to mark the corner boundaries.
- 14.1.3 The leaseholder shall be responsible for all costs of professional land surveys not performed by the Department.
- 14.2 It is unlawful for the aquaculture lessee to not mark each corner of a Shellfish Aquaculture Subaqueous Land Lease with a PVC pole [or PVC pole buoy] at least six (6) inches in diameter and extending at least five (5) feet above the surface of the water [at mean high water]. (Penalty Section 7 Del.C. §2012)
- 14.3 The leaseholder shall affix an orange reflective diamond placard, measuring a minimum of 12 inches by 12 inches to each corner pole.
 - 14.3.1 The leaseholder shall mark each corner pole with at least 24 inches of white or orange reflective material above the water line, a portion of which must be visible from all directions.
 - 14.3.2 The leaseholder shall mark each corner placard with the corresponding lease number in three (3) inch black block lettering.
- 14.4 A buoy, float, sign, or other device used to mark a lease may not contain a sign, display, light, structure, figure, painting, drawing, message, plaque, placard, poster, billboard, or device that is designed, intended, or used to advertise a product or service offered by a private entity or inform the general public of anything other than that the buoy, float, sign, or other device marks the location of a shellfish aquaculture lease.
- 14.5 The leaseholder shall maintain and meet any standard for corner and perimeter marker structures throughout the duration of the lease.
- 14.6 It shall be unlawful to not maintain proper lease markings in accordance with this subsection. (Penalty Section 7 Del.C. §2012)

15.0 Harvesting a Shellfish Aquaculture Subaqueous Land Lease

- 15.1 It is unlawful for any person to use any device attached to a vessel powered by sail or mechanical means, or any mechanical gear in the harvesting of Shellfish Aquaculture Subaqueous Land Lease sites in Delaware's Inland Bays, except that powered winches may be used to raise and lower cages. (Penalty Section 7 Del.C. §2012)
- 15.2 Anyone lawfully engaged in planting, tending, or harvesting cultured shellfish in Delaware's Inland Bays shall not be bound by the seasonal restrictions of 7 DE Admin. Code 3772.
 - 15.2.1 Notwithstanding subsection 15.2, the leaseholder, and any approved workers on the lease site shall adhere to Delaware Shellfish and Recreational Water Programs' regulations regarding *Vibrio* and shellfish harvest.
- 15.3 The leaseholder, their licensed harvester, or anyone lawfully harvesting in the direct presence of same, may harvest oysters of any size from a Shellfish Aquaculture Subaqueous Land Lease site for which they are licensed.

16.0 Active Use of Shellfish Aquaculture Subaqueous Land Lease Sites

- 16.1 The Department shall conduct an annual review of each shellfish aquaculture lease in order to determine active use of the lease in the previous year.
- 16.2 In the event that an aquaculture lease is determined by the Department not to be active for a period of one (1) year (12 months), the lease shall be terminated and the lease site may revert to the inventory of available lease sites.
- 16.3 An active lease in Delaware's Inland Bays must meet the following conditions:
 - 16.3.1 After two (2) years (24 months) from the date of lease issuance or transfer, leaseholders must provide evidence to the Department's satisfaction that they annually plant at least 100,000 shellfish per acre leased.
 - 16.3.2 After the first three years of the lease, each leaseholder shall annually harvest and produce proof of sale for an average of at least 10 bushels of oysters per acre or 5,000 clams per acre, or an equivalent combination.
- 16.4 Notwithstanding subsection 16.3, the minimum planting requirement shall not apply to the initial two (2) years (24 months) of a lease, but lessees must plant sufficient shellfish to ensure that the production requirement can be met by the end of the third year (36 months), and annually thereafter.
- 16.5 The Department may, at its discretion, grant written exemptions from the planting, harvest or sale requirement due to catastrophic loss or low shellfish stock availability.

17.0 Reporting Requirements for Shellfish Aquaculture Subaqueous Land Leases and Shellfish Aquaculture Nursery Structures

- 17.1 It is unlawful for the leaseholder to not file monthly reports by the tenth day of the following month indicating if any clam or oyster planting or harvest activity occurred or did not occur, including the farm gate prices paid, on forms provided by the Department.
- 17.2 It is unlawful for leaseholders and shellfish aquaculture nurseries to not completely and accurately answer a yearly questionnaire provided by the Department within 45 days from the date of receipt.
- 17.3 It is unlawful for shellfish aquaculture nursery permittees to not file yearly reports indicating species and numbers of shellfish grown and planted or sold.
(Penalty Section 7 **Del.C.** §2010(b))

18.0 Annual Shellfish Aquaculture Subaqueous Land Lease Renewal

- 18.1 Leaseholders renewing their leases shall submit the annual lease fee and form by December 31 of their current year's lease.
 - 18.1.1 Renewal of the lease is subject to the leaseholder and operations plan meeting all criteria for leasing.
 - 18.1.2 If the Department finds that it is contrary to public interest to renew a lease, then the lease may not be renewed.
- 18.2 If a leaseholder does not renew their lease by the payment deadline, the lease may be terminated for non-payment, and the leased area described in the terminated lease shall revert to the inventory of available lease sites.

19.0 Shellfish Aquaculture Subaqueous Land Lease Transfers

- 19.1 A leaseholder may apply to transfer a lease by completing a Lease Transfer Form supplied by the Department, and signed and notarized by the parties making and receiving the transfer, provided that the aquaculture operation remains the same, including size, species, gear, and method of culturing.
- 19.2 The Department shall not transfer a Shellfish Aquaculture Subaqueous Land Lease without a complete and accepted Shellfish Aquaculture Subaqueous Land Lease Application from the party to whom the lease is being transferred, a boundary survey as specified in subsection 14.1, evidence of bond and liability coverage as specified in Section 7.0, and full payment of all application and lease fees.
- 19.3 The party to whom the lease is being transferred shall be responsible for paying the lease application fee prior to the completion of the transfer.

20.0 Shellfish Aquaculture Subaqueous Land Lease Expiration, Surrender, Termination and Sale

- 20.1 A leaseholder may surrender their lease to the State, in whole, or in one (1) acre increments, at any time during their lease tenure; however, the leaseholder will remain liable for the removal of shellfish aquaculture gear and cultured shellfish on the lease consistent with subsection 20.4.
- 20.2 The Department may terminate a Shellfish Aquaculture Subaqueous Land Lease at any time where the Department determines that continuing the lease does not serve the public interest of the State. Criteria for termination includes, but is not limited to:
 - 20.2.1 Failure to pay the annual lease fee in advance of the year.
 - 20.2.2 Failure to file information required by the Department, or filing false information to the Department.
 - 20.2.3 Failure by new leaseholder to apply for a lease transfer.
 - 20.2.4 Failure to keep the lease boundaries marked as required in Section 14.0.
 - 20.2.5 Failure to comply with the regulations governing the use of shellfish aquaculture leases in Delaware's Inland Bays.
 - 20.2.6 Failure to file reports as required in Section 17.0.
 - 20.2.7 Evidence that the leaseholder willfully extends or causes to extend the lease boundaries.
 - 20.2.8 Failure to adhere to the operations plan.
- 20.3 The Department shall notify an aquaculture leaseholder by registered mail of its decision to terminate a lease.
 - 20.3.1 A leaseholder may contest the Department's proposed decision by requesting a review by the Environmental Appeals Board, to be filed no later than 30 days after receipt of the Department's termination decision.
 - 20.3.2 Failure of a leaseholder to respond to the Department's notification within 30 days of receipt of the notification shall cause the lease to revert to the State.

- 20.4 In the event of expiration, surrender, or termination, the leaseholder is responsible for restoring the lease area to pre-lease conditions within thirty (30) days from the date of expiration, surrender, or termination. This shall include the removal of all cultured shellfish, structures, rafts, floats, markers, buoys, lines, cages, anchors, netting, stakes, and other equipment brought to the site.
- 20.4.1 A leaseholder who does not restore the area to pre-lease condition within 30 days shall surrender their performance bond, in order to enable the Department to remediate the site.
- 20.4.2 Equipment that is not cleared from the site within 30 days from expiration, surrender, or termination of the lease shall be considered abandoned. Abandoned equipment will be disposed of in the manner described in 7 Del.C. §2013(f).
- 20.5 Any person, corporation, or entity who has had their lease terminated, or has abandoned their lease may not apply for a new lease or a transfer of lease for a period of five (5) years.
- 20.6 It is unlawful to sublease, rent, or sell a Shellfish Aquaculture Subaqueous Land Lease.
(Penalty Section 7 **Del.C.** §2012)

21.0 Shellfish Aquaculture Subaqueous Land Lease Condemnation

- 21.1 Any subaqueous lands leased for shellfish aquaculture in Delaware's Inland Bays and subsequently classified as prohibited, seasonally closed, or conditionally closed by the Department for the harvest of shellfish shall be governed by the following:
- 21.1.1 Leases falling under episodic closure shall adhere to the Delaware Shellfish and Recreational Water Programs guidelines.
- 21.1.1.1 It is unlawful to harvest shellfish from an area that Delaware Shellfish and Recreational Water Programs has declared closed. Leaseholders may tend their shellfish if their lease falls under episodic closure. (Penalty Section 7 **Del.C.** §2012)
- 21.1.1.2 Leaseholders may resume harvesting shellfish when the Delaware Shellfish and Recreational Water Programs reopens the area for shellfish harvest.
- 21.1.2 Should a lease area remain under a lengthy closure, the Delaware Shellfish and Recreational Water Programs will consider options for relay or harvest of shellfish, at their discretion.
- 21.1.2.1 Prior to moving any shellfish, the leaseholder shall apply for and receive a no-cost permit for this purpose issued by the Department.
- 21.1.2.2 The Department shall not assume any liability for any changes in classification of lease area, and shall assume no liability to the lessee for damages incurred due to such actions.

22.0 Emergency Shellfish Lease

- 22.1 The Department may issue an emergency shellfish lease where a leaseholder provides evidence to the Department's satisfaction that the health and safety of their current cultured shellfish are in imminent danger due to the lease location and such threat may be ameliorated by a change in location, provided the following:
- 22.1.1 The leaseholder completes an Emergency Shellfish Relocation Application.
- 22.1.2 Emergency shellfish relocations will be made to an available location, selected at the Department's sole discretion, within an approved SADA.
- 22.2 Within 60 days of emergency shellfish relocation approval by the Department, a leaseholder must return to their original lease site, file an application for a new lease, or submit an Emergency Shellfish Relocation Application.
- 22.2.1 An emergency shellfish relocation lease is valid for no more than two 60-day lease periods.

23.0 Prohibited Activities

- 23.1 It is unlawful to alter the existing condition of any area for which a Shellfish Aquaculture Subaqueous Land Lease has been issued, including but not limited to, adding or removing fill, shell, or other material, without first obtaining the Department's written approval.
- 23.2 It is unlawful to culture oysters unless they are fully contained in gear.
- 23.3 It is unlawful for a Shellfish Aquaculture Subaqueous Land Leaseholder or shellfish aquaculture license holder, or those individuals working under the physical presence of a licensed shellfish harvester, to operate in any manner that is inconsistent with the operations plan governing the use of a Shellfish Aquaculture Subaqueous Land Lease.
- 23.4 It is unlawful to engage in shellfish aquaculture activities in Delaware's Inland Bays except according to the terms and conditions specified in a Department-issued Shellfish Aquaculture Subaqueous Land Lease, a Shellfish Nursery Permit, or an Emergency Shellfish Lease.

- 23.5 It is unlawful to harvest or take wild bivalve shellfish from permitted lease sites and any navigation corridors.
- 23.6 It is unlawful to culture any non-native shellfish species in Delaware's Inland Bays; however, triploid varieties of native species are permitted.
- 23.7 It is unlawful to prevent the public from traversing or hook and line fishing in a Shellfish Aquaculture Subaqueous Land Lease.
- 23.8 It is unlawful for boats traversing a marked navigation corridor or a marked lease to exceed a Slow-No-Wake speed, as defined in 7 Admin. Code 3100 (2.0).
- 23.9 It is unlawful to interfere with the lawful tending or harvest of a Shellfish Aquaculture Subaqueous Land Lease.
- 23.10 It is unlawful for boats, other than those operated by the leaseholder, or their employees, to anchor within a shellfish aquaculture lease site or to tie off to any shellfish aquaculture gear or lease boundary marking.
- 23.11 It is unlawful for boats to anchor within a marked navigation corridor or to tie off to any shellfish aquaculture gear or lease boundary marking.
- 23.12 It is unlawful for anyone to culture more than 1,000 shellfish unless lawfully operating under a Shellfish Aquaculture Subaqueous Land Lease or Shellfish Nursery Permit.
- 23.13 It is unlawful to fish or crab with any gear other than hook and line within the boundaries of an active and marked Shellfish Aquaculture Subaqueous Land Lease or navigation corridor.
- 23.14 It is unlawful to use canopy predator nets, or any barrier netting out of the water on a Shellfish Aquaculture Subaqueous Land Lease or shellfish nursery structure.
- 23.15 It is unlawful to use supplemental algae to culture shellfish in Delaware's Inland Bays.
(Penalty Section 7 **Del.C.** §2012 and §2013(d))

18 DE Reg. 151 (08/01/14) (Final)